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The Auk

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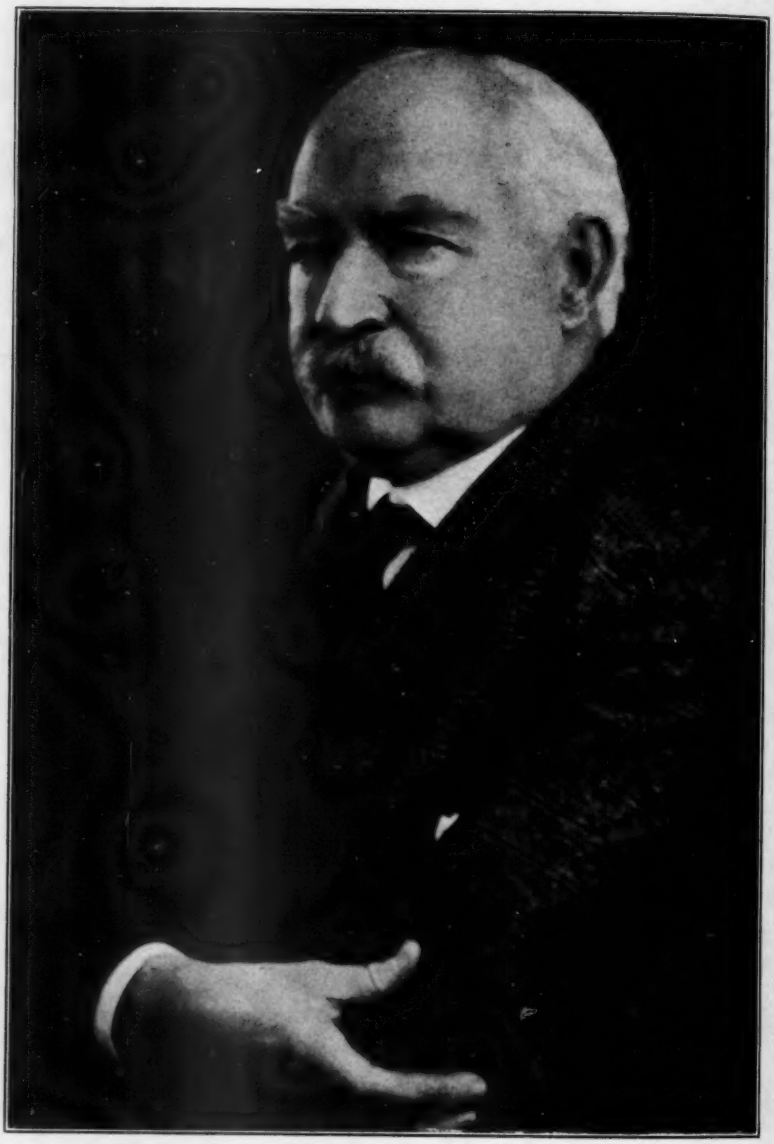

UNIV. OF MICH.

THE AUK:

A QUARTERLY JOURNAL OF ORNITHOLOGY.

VOL. XLVI. APRIL, 1929. No. 2.

IN MEMORIAM—HARRY BALCH BAILEY.

BY A. K. FISHER.

(*Plate VI.*)

IT oft has been said that coming events cast their shadows before. Experience would seem to justify us in giving this thought ready acceptance, but the manner of approach may be so subtle that those on the alert only are blessed with premonition.

In the same way increasing popular interest in new or developing activities seems to generate a pervading spirit that enters the baby mind to be developed as life matures. An illustration is found in the extended western explorations that were made possible by the transcontinental railroad surveys. These so greatly stimulated ornithological research, that between 1850 and 1860 through the activities of Spencer F. Baird and his enthusiastic co-workers wonderful progress was made, and Baird's superb volume on the 'Birds of North America,' in collaboration with Cassin and Lawrence, appeared in 1858. During this same period, as if to be in position to receive the mantle from the pioneer workers, a number were born who later with a few of their elders became founders or early members of the American Ornithologists' Union and other natural history associations. Through the inspiration which they carried forward, and through their own efforts and co-operation, the ornithology of the United States today is recognized to be of the highest standard.

Among those who entered on the stage of life with the raising of the curtain in the decade I have mentioned was Harry Balch Bailey, the subject of this memorial. Bailey was born on February

27, 1853, in Boston, not so far from where many of our forebears got their first glimpse of the Western World. He passed away in Buxton Hospital, Newport News, Virginia, after a brief illness from pneumonia, at eleven o'clock, P.M., on February 10, 1928, on the threshold of his seventy-sixth year. The burial was in Greenlawn cemetery.

He graduated from the Boston High School in 1868 shortly after he was fifteen years old. Just how early in life he took up the study of birds is not clear from data at hand. Undoubtedly, however, the song of birds attracted his attention in early life, for by the time he was twelve years old his interest in music had developed an ability as pianist that enabled him to play in a concert at the Boston Conservatory of Music. This assumption is based on the fact that often there is a certain correlation between bird song and instrumental music in the minds of those who are interested in both.

In the early seventies Bailey was especially fortunate in having Ruthven Deane, William Brewster, and Henry A. Purdie among his companions, all of whom were enthusiastic in the study of birds and bird life. Since many valuable non-game birds were brought to the market by gunners with their game, these young ornithologists kept a close watch of the Boston market and secured much desirable material.

In February, 1879, just after Dr. C. Hart Merriam and I had received notice of successfully passing our examinations at the College of Physicians and Surgeons in New York, Bailey, Deane, and Purdie called, extended congratulations and spent several pleasant hours with us in which was formed the beginning of a lasting friendship.

While in Cambridge and Boston, he was active in assisting in the organization of the Nuttall Ornithological Club, and in its early stages was its treasurer—from February 12, 1876, to April 16, 1877. In the opening number of the 'Nuttall Bulletin,' which by the way was probably the first truly ornithological journal in this country, he had a paper on the breeding birds of Cobb Island.

On May 17, 1875, Bailey married Lillie Adams Taylor, of Brookline, Mass., and on their honeymoon trip by boat from New York

they went to Norfolk and thence to Cobb Island off the Virginia Coast. At this time birds were abundant on these outlying islands and it was not difficult to secure good series of their eggs. Material and notes taken while on this trip to the island furnished the data for the paper above mentioned.

Presumably because his grandfather was a wholesale dry-goods merchant, his mother was anxious to have him enter this line of business, which he did just after completing his high-school course. Four years later, however, he became connected with a shipping firm in Boston. While thus employed he had opportunities to give some time to making a collection of eggs and to join his friends Deane, Brewster, and Purdie in various trips. The collections made by Bailey and his friend Deane at Lake Umbagog in May, 1870, undoubtedly inspired Brewster to visit this locality, where becoming interested he later spent much time in an extended study of the avifauna, which finally took form in a valuable posthumous publication,

In 1877, along the line of advancement, Bailey removed to New York, where with two partners he engaged in a ship and insurance brokerage and general commission business at 51 South Street. Among their assets were fourteen sailing vessels. While in New York he lived at least part of the time at South Orange, N. J., which gave him a better opportunity for out-of-door work. Writing to a friend June 7, 1877, he mentioned seeing a fine Cardinal Grosbeak, as he was on his way to the morning train. In the winter of 1877–78 he joined with Dr. C. Hart Merriam, Eugene P. Bicknell, S. Lowell Elliot, R. B. Lawrence, Newbold Lawrence, George Badger, Franklin Benner, Harry Edwards, and several others in founding the Linnaean Society of New York.

It must have been about this time, too, that he devoted many days of hard work to the preparation of an index and summary of all the bird notes that had appeared in the first twelve volumes of 'Forest and Stream.' This publication, which was printed in 1881, had in its one-hundred and ninety-five closely printed pages a wonderful mass of material of the greatest value to working ornithologists and to progressive sportsmen. It is to be regretted that he or some other self-sacrificing ornithologist did not have the time or inclination to continue this work to include subsequent

volumes, especially those in which Dr. George Bird Grinnell, as editor, brought the natural history columns to a high state of accuracy and usefulness. From his remarks in the preface it would seem that Bailey had in mind this commendable plan for future work.

When twenty-three ornithologists from various states met in New York, in September 1883, to found the American Ornithologists' Union, Bailey was of the number. It was a memorable occasion, and those who were fortunate enough to be present got the thrill of anticipation of the future of this rather unorganized but enthusiastic beginning. Our distinguished foreign guests, P. L. Sclater, Howard Saunders, and Hobson, looked with interest and confidence upon the blossom from which has developed such abundant fruit.

In 1888 Bailey made a collecting trip to the Dakotas and California, and was fairly successful in securing choice material. In 1887 a branch of his New York shipping house was opened in Newport News to which place he moved in 1889, on account of the falling off of business in New York. On leaving for the South he sold his collection of eggs, which at the time was considered one of the finest in the country, to the American Museum of Natural History. He was one of the first to arrange the smaller eggs with the nests, and took great pride in securing sets of the rarer Warblers of New England and Canada. In 1891, on account of financial reverses, he resigned from the Union, but in 1926 was elected a Corresponding Fellow.

After moving to Newport News it is understood that on account of lack of congenial ornithological friends and because his two elder sons became interested in entomology, he took up this study with them, specializing on beetles. Within a few years he had amassed a fine collection, but unfortunately it was ruined while it remained packed for two years, awaiting the building of a new home.

Those who have had the privilege of knowing Dr. E. A. Schwarz can readily understand that as soon as the student met this distinguished coleopterist, cordial relations immediately followed. Later, under the mellowing influence of mutual interests, Bailey rarely visited Washington without giving himself the pleasure of

calling on his entomological friend. Through this intimate contact he presented to the Smithsonian Institution many interesting specimens of insects some of which now are incorporated in the study collection. It has been stated that on his last visit to Washington in September 1927, after calling on Doctor Schwarz, he was much depressed over the enfeebled condition of his friend, who nevertheless through the irony of fate outlived him for a number of months.

Through a boyish enthusiasm for the out-of-doors he readily found interest in all branches of natural history, and his adaptability to varying conditions in accordance with which he could change his major activities, gave him a well-rounded life full of enviable experiences. When the American Society of Mammalogists was organized in Washington in 1919, he became one of its charter members. Although he continued to collect insects at every opportunity, after losing his large collection, he paid considerable attention to assisting his son Harold in developing his oölogical collection and library.

As time went on his interests had a tendency to revert again to ornithology and as a consequence a portion of each winter since 1900 was spent in southern Florida, assisting his son in making collections. Feeling the allurement of watching birds in their mountain homes, he spent portions of the last four summers in the higher reaches of North Carolina and South Carolina, where he obtained quite extensive bird records. At intervals between 1908 and 1916 he worked individually, and also associated with his son, on the birds and mammals inhabiting the Alleghany Mountain region of Virginia. The notes and observations made during the first five years materially assisted his son and furnished most of the data relating to the region in his work the 'Birds of Virginia,' which was published in 1913.

Soon after Mr. Bailey became a resident of Newport News he assisted in movements for its betterment. His friends assert that perhaps one of his most important services to the city was in connection with the establishment of the public library. It was largely through his efforts that the library association was organized, and through his untiring work in coöperation with others that the fine collection of books was made available to the public.

It is a remarkable coincidence that the change of the library from a voluntary association to an organized corporation, to increase its usefulness, which was Bailey's ambition, should have been accomplished on the day of his death. This involved a bond issue of $50,000 that was authorized to erect a suitable building, and for other library purposes. The chairman of the Library Board in speaking of the great loss sustained by the library in the death of its honorary librarian, voiced the sentiment of all the members. For years Bailey had been the guiding spirit of the library, giving much of his time and energy unselfishly for the public good, with no pecuniary benefit. No sacrifice of self seemed too great, and the fine collection of books stands as a monument to him, and to his devotion to his ideal. To the members of the Board who for so long have had the privilege of his friendship, his passing brought the keenest sense of personal loss. His kindly presence and greetings made his visits to the library a pleasure to everyone on the force, and his knowledge of books was most helpful to them. Since all were accustomed to turn to him for advice in matters of uncertainty, the library, without him, will have its added perplexities.

At the time of his death, he was a Corresponding Member of the American Ornithologists' Union, the Nuttall Ornithological Club, and the Natural History Society of Glasgow, a member of the Wilson Ornithological Club, and of the American Society of Mammalogists, and a Director of the Florida Society of Natural History.

Numerous ornithological and other friends throughout this country who always had held him in high esteem, were saddened by his passing, and those who were blessed by his friendly visits will miss him, now that they are at an end. He is survived by his widow, three sons—William J., Harold H., and Gordon P.—and ten grandchildren.

He has gone; but the results of that which he accomplished during the activities of life remain to soften the problems of others who follow, and in so doing will help the world on its upward trend. Who knows but that this is one of our most important duties in life?

Biological Survey,
Washington, D. C.

YOUNG GOLDEN EAGLES IN NEST APRIL 26, 1925.

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NOTES ON THE GROWTH AND BEHAVIOR OF YOUNG GOLDEN EAGLES.

BY E. L. SUMNER, JR.

(*Plates VII–X*).

ON April 26, 1925, a nest of the Golden Eagle (*Aquila chrysaëtos*), containing two young, was discovered in a ninety foot sycamore (*Platanus racemosa*) growing in hilly pasture land of the eastern part of Los Angeles County, California. Frowning cliffs and lofty mountain heights have no part in the landscape of this region, where the gently undulating hills are treeless save for scattering patches of oaks (*Quercus agrifolia*) and the straggling lines of sycamores which rise from the canyon bottoms and mark the water courses. Rather is it a land of Buzzards and ground squirrels; and the great pile of sticks which stood up against the horizon some sixty feet from the ground seemed strangely out of place amid these unromantic surroundings.

Numbers 237542 and 237543 were placed on the young birds, and constitute the first banding record for this species in the files of the Biological Survey. The young Eagles were covered with a down which varied from a quarter to a half inch in length, and through which the dark wing-feathers were pushing their way, giving the birds a somewhat spotted appearance. Both adults were perched in the vicinity upon our arrival, but showed the characteristic unconcern of these birds by silently slipping away, not to reappear during our stay.

On February 18 of the following year the female flushed from a set of two practically fresh eggs, now in the collection of the writer, but the next year the unusual happened, and on February 27, 1927 the nest was found to contain *three* eggs, whose incubation was judged to be one week. These were undisturbed, and from this time on a visit was made each Sunday, at which time the weights of our subjects were recorded, and photographs taken, in addition to as many notes of interest regarding their development as the scant time available permitted. The following report has been condensed from my weekly notes, the individual identity of the

young birds being maintained by bands which were changed each week to accommodate growth.

February 27, 1927. The female flushed from three eggs at a distance of 100 feet, showing in her reluctance to leave, less than her usual wariness. She disappeared immediately, not to be seen again that day. Weights of eggs (in grams):

No.465252	No. 465251	No. 3
143.0	143.4	133.7

March 20, 1927. Female flushed at 225 feet; male observed circling about, a quarter of a mile to the south. Both departed, not to return while we were there. A very audible chirping sound came from the nest at regular intervals.

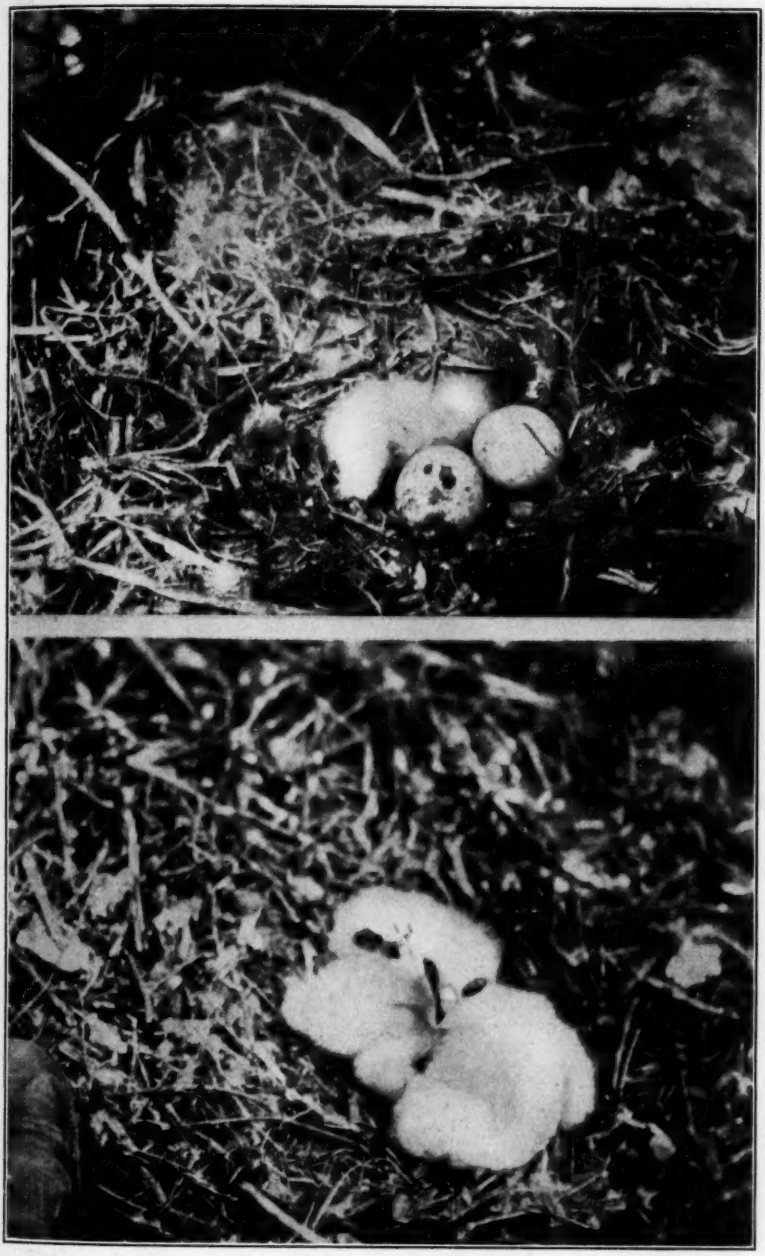
No. 465252 just hatched; weight of chick 105.0. Iris cloudy brown; eyes not fully open. Bill black, with hook not very prominent; "egg tooth" very noticeable. Skin around base of bill yellow. Feet and legs yellowish flesh-color; claws slightly paler. Down of two lengths: a thick dirty white covering about one-half inch in length overlaid by a scantier and somewhat longer growth. Bird unable to distinguish objects, and chirps incessantly.

No. 465251 on the point of hatching; a hole in the side of the egg through which the head of the chick can be seen. This bird also chirps, but less frequently. Weight 128.6.

No. 3 silent. Weight 126.2.

A headless ground squirrel (*Citellus beecheyi fisheri*) in the nest. Shell of first chick had been removed and fragments were picked up beneath the tree.

March 27, 1927. Age one week. Female flushed at 450 feet, and flew over the nest twice, at a considerable height, before leaving. All three young hatched and able to take notice of moving objects. Even when I am eleven feet above the nest they stretch their necks forward, chirp for food, and follow my movements with open bills. When a finger is offered to them their cries become more vigorous and feeble attempts are made to bite it, while small bits of ground-squirrel meat are eagerly swallowed. The posterior half of a freshly killed Crow in the nest, as well as the older remains of three ground-squirrels, some of them



YOUNG GOLDEN EAGLES.
UPPER: MARCH 20, 1927; JUST HATCHING.
LOWER: MARCH 27; ONE WEEK OLD.

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decayed and full of maggots. The two halves of the third egg shell, which were picked up on the ground below, show that the line of cleavage occurs at the greatest diameter of the egg.

Although made as large as possible the previous week, the band on the largest bird, number 465252, is now so tight as to cause a noticeable swelling of the foot. A larger size substituted, and the inflammation much reduced in half an hour. Iris, skin at base of bill, and feet, as before, but claws are grayish, becoming darker at the tips. Chirps only when disturbed. When looking about, this bird can stand upon its tarso-metatarsus and stretch its neck to the fullest extent.

	No. 465252	No. 465251	No. 3
Weight	357.3	232.3	98.2
Length	8 in.	6½ in.	4¼ in.

April 3, 1927. Age two weeks. Behavior of female as before. Only the first two chicks now present, the fate of the smallest being left to conjecture. The day is damp and cloudy, and when lowered to the ground for more careful study both evidently feel the cold. They chirp continually, and while No. 465252 remains wherever put, the smaller chick refuses to keep still for any length of time, and persists in crawling away. Egg tooth less conspicuous, owing to increased size of bill. Color of soft parts as before, except that claws are darker.

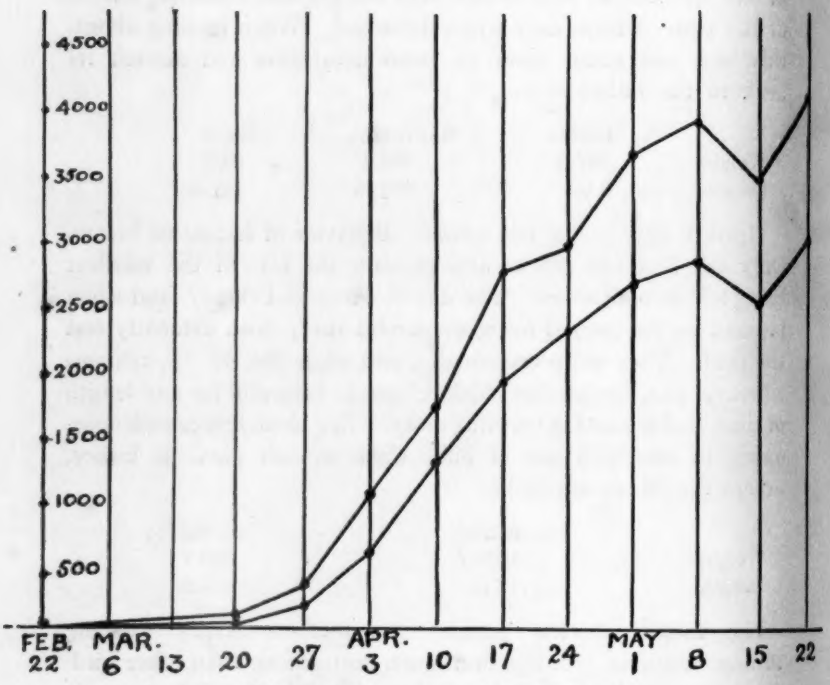
	No. 465252	No. 465251
Weight	1022.7	584.7
Length	12 in.	8.5 in.

No. 465252—A few primary pin feathers faintly showing through the skin. Chirps in a much deeper tone than other bird. Band found to have chafed enough to draw blood, but foot apparently uninjured.

A fresh supply of green material, chiefly weeds, always present in the nest. When venting their excreta, the young turn their backs to the edge of the nest and discharge to a distance of seven feet clear of the edge, the ground and foliage beneath being spattered on all sides. The feathers of a Meadowlark (*Sturnella neglecta*) observed, as well as the usual remains of ground-squirrels.

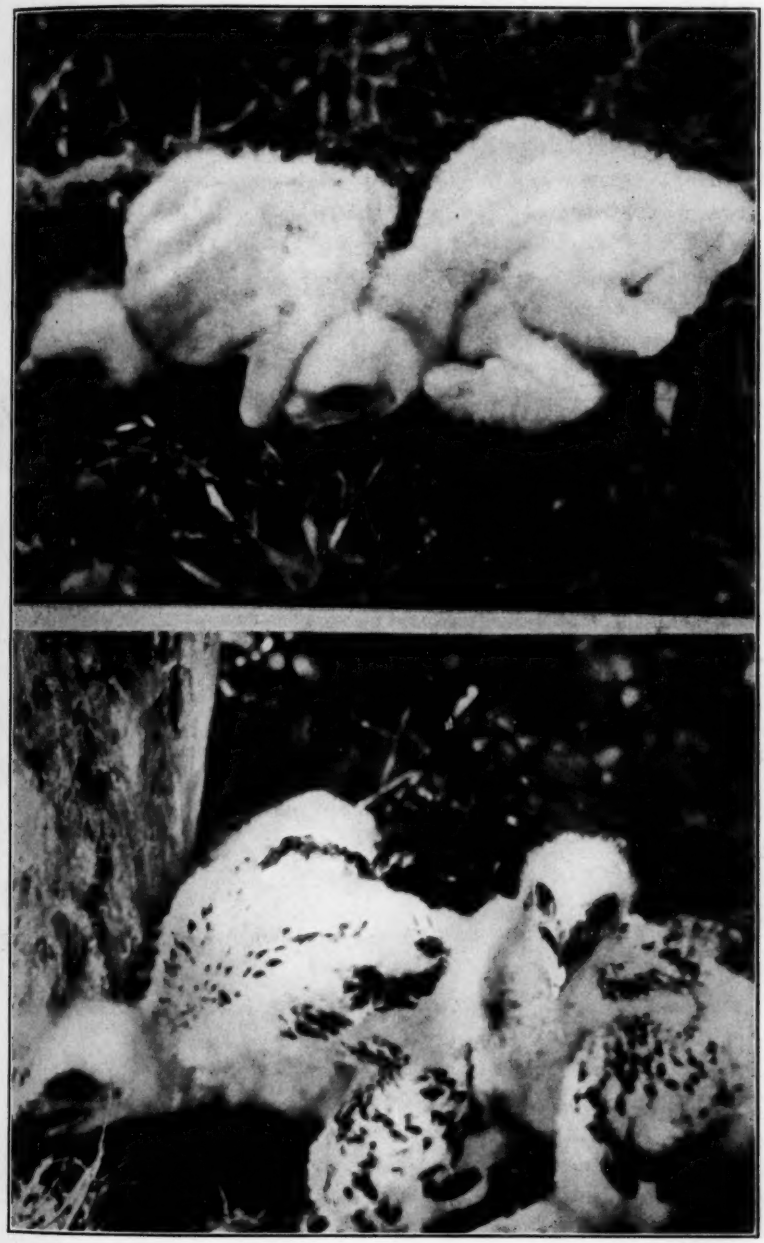
April 10, 1927. Age three weeks. Female flushed from a

nearby fence post, disappearing as usual. The morning began in fitful sunlight, but when I was half way up the tree rain commenced to fall, and continued steadily for most of the day and all that evening. Both youngsters rear up with open beaks in feeble menace when I climb over the edge of the nest, but soon settle down, remaining silent and motionless when undisturbed. The thick covering of down seems fairly adequate to shed the



Increase in weight in two nesting Golden Eagles.

rain, which is coming down quite hard, but it seems probable that the parent would furnish additional protection if we were not present. As soon as they are set down, both birds chirp and run to the opposite edge of the nest from me, making photography difficult, especially since they refuse to remain facing my direction, and the rain prevents anything but hurried work. Claws black; budding wing-feathers about a quarter inch long.



YOUNG GOLDEN EAGLES.
UPPER: APRIL 3; TWO WEEKS OLD.
LOWER: APRIL 24; FIVE WEEKS OLD.

UNIV. OF MICH.

	No. 465252	No. 465251
Weight	1662.4	1272.7
Length	13 in.	10.2 in.

A piece of ground-squirrel, and part of a cottontail (*Sylvilagus audubonii sanctidiegi*) in the nest, but decaying remains of previous kills no longer present.

April 17, 1927. Age four weeks. As we were arriving the adult appeared from the north and flew to within 300 feet of us before leaving. Five minutes later she came back, flying straight for the nest and carrying a branch of green oak leaves, some of which are found in the nest at every visit. When about 200 feet away, however, she again caught sight of us, dropped the branch, and flew away, not to be seen again.

The second and smaller youngster is much the more lively and aggressive. When I climb over the nest it rears up and waddles toward me hissing, with open beak and wings upraised. The larger bird, on the contrary, lies quietly in the nest, offering resistance only when handled. Both struggle and chirp vigorously when picked up, but although their claws and feet are, for the size of the birds, enormous, they are harmless and incapable of doing injury. As the bill continues to grow, the egg-tooth becomes less and less noticeable, and is now but an insignificant excrescence. The wing quills are now two inches long, of which a half inch has burst from the sheath.

	No. 465252	No. 465251
Weight	2668.8	1880.9
Total length	17 in.	14.5 in.
Total wing spread	34 in.	26 in.
length of hind claw	1¼ in.	1⅛ in.

Remains of several ground-squirrels in the nest, the top of which is gradually becoming flattened and packed down.

April 24, 1927. Age five weeks. Female seen only for an instant—sailing away. The smaller bird is as usual the aggressive one, advancing with open beak, and feebly striking my feet with up-raised wings, while uttering its hissing gasp. Iris brown; skin at base of bill, and feet, as before, but claws darker. Egg-tooth barely visible. Wing feathers five inches long, two inches of which have burst from the sheath.

	No. 465252	No. 465251
Weight	2870.0	2270.0
Total length	19 in.	16.5 in.
Total wingspread	43 in.	38 in.
Length of tail quills	2.7 in.	2.5 in.
of which there has burst out	1 in.	⅞ in.
	Bird very quiet, its few protests often being uttered in a tone much deeper than the original falsetto chirp	Bird obstreperous, but silent except for hissing.

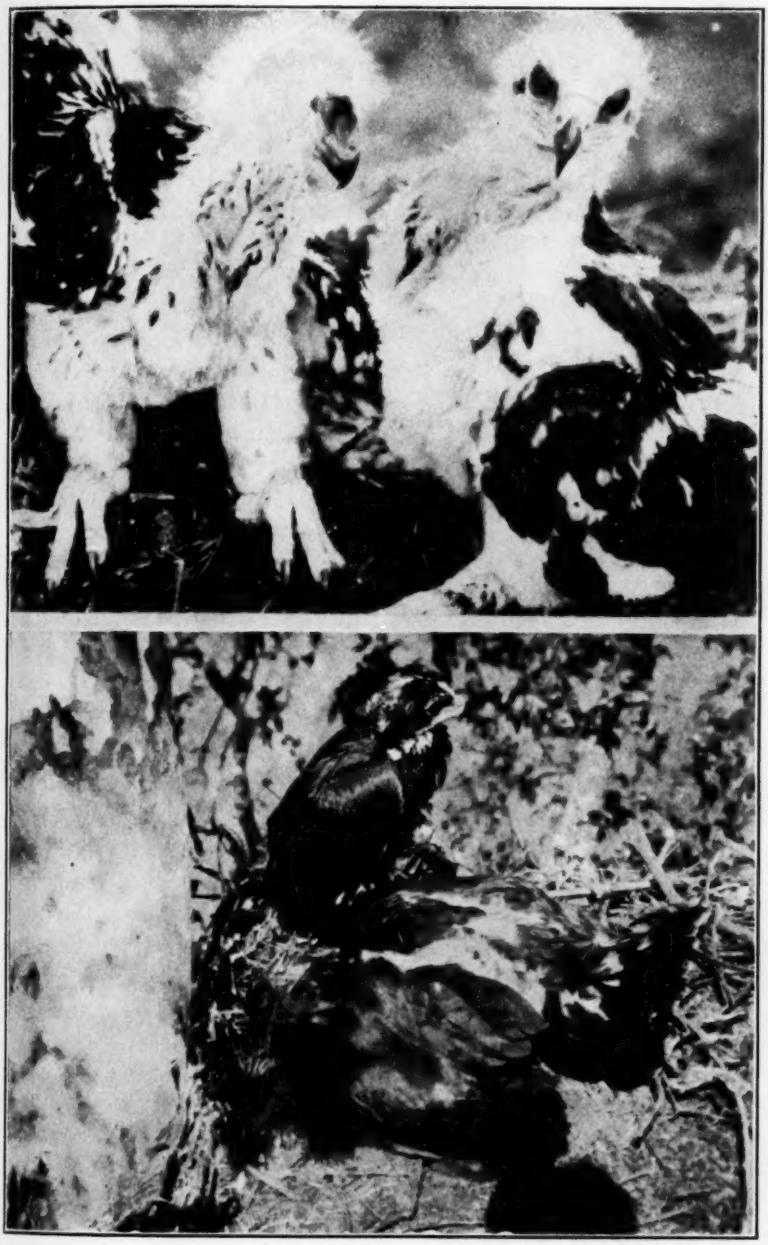
The nest, owing to its position on the crotch, is smaller than the average for this species, being only four feet in diameter; and since our weekly visits were beginning to produce a very evident effect upon the foundations, it was wired securely in place at this time. The usual green material present, as well as the customary ground-squirrel remains.

May 1, 1927. Age six weeks. Adult observed several times flying about. The smaller bird is more hostile than ever, striking feebly with outstretched claws in addition to the hissing and the buffeting of wings. Although usually silent when handled, this bird, when it does protest, shows no change in voice from the first high pitched tone. The larger youngster is as quiet and docile as usual, taking no notice of me except when handled. When aroused it occasionally squeals in its earlier high pitched voice, but usually with the deeper note. Egg-tooth hardly discernible. Iris and soft parts as before. Wing feathers seven inches in length, of which four inches have burst from the sheath.

	No. 465252	No. 465251,
Weight	3581.7	2606.7
Total wingspread	48 in.	46 in.
Length of tail quills	4.5 in.	4 in.
of which there have burst out	2.5 in.	1.5 in.

Green material present as usual, but no food. Although the nest itself is quite clean, with but a slight odor and few flies; the circle of excrement below is now forty feet in diameter and all the immediate leaves and branches are encrusted with white.

May 8, 1927. Age seven weeks. Adults not seen. The smaller eaglet uses its talons occasionally, but may still be handled with perfect safety; the larger youngster is as docile as ever. On



YOUNG GOLDEN EAGLES.
UPPER: MAY 1; SIX WEEKS OLD.
LOWER: MAY 15; EIGHT WEEKS OLD.

UNIV. OF MICH.

being lowered to the ground, both display considerable ability in locomotion, using both wings and legs when retreating into the long grass, but no attempt at flight is made, and when returned to the nest their customary quiescence is resumed. The inefficiency of the disproportionately large feet is well illustrated by the difficulty shown in perching. When placed together on a limb with a diameter of about four inches their grip is too weak to hold them upright for any length of time, and a tumble follows every undue movement.

The birds, although so large, still maintain their usual prone position in the nest when undisturbed. This attitude, so characteristic of young raptores and which is to be observed in many of the photographs, renders them invisible from below, and perhaps there is some measure of protection to be derived from this, as well as the saving of energy.

Egg-tooth no longer visible. Total wingspread 51 inches. Length of primary quills nine inches, of which 5.5 inches have burst out. Length of tail quills six inches, of which three inches have burst.

	No. 465252	No. 465251
Weight	3851.7	2801.7
Total length	26 in.	24 in.

The nest has become much flattened during the past week, testifying to the increased activity of the young birds, and the surface has become trodden into a litter of pulverized animal and vegetable matter. Very little green material noted, but many pellets of hair, these being observed for the first time, and consequently preserved. For several weeks two pairs of house Finches (*Carpodacus mexicanus frontalis*) have been nesting in the crevices of the under side of the nest.

May 15, 1927. Age eight weeks. Female observed soaring over a nearby hill as we approached. The larger bird is less sluggish than heretofore, occasionally showing resistance, and uttering at times a deep, rasping croak, unlike any sound made previously. Its smaller nest mate has now abandoned the old prone attitude and stands up most of the time, gazing out across the hills. Iris still brown. Skin at base of bill yellowish. Feet yellowish flesh; but claws now jet black.

	No. 465252	No. 465251
Weight	3401.7	2441.7
Total wingspread	62 in.	53 in.
Length of primary quills	11 in.	10 in.
of which there have burst out	7 in.	7 in.
Length of tail quills	7 in.	6 in.
of which there have burst out	5 in.	4.5 in.

The above record shows an actual loss in weight on the part of both youngsters from the figures of the preceding week which is quite unaccountable. However, since there is no indication of ill health or weakness it may be due to the increased exercise which the trampled surface of the nest indicates. The usual ground-squirrel remains present.

May 22, 1927. Age nine weeks. Female flew by the nest and was seen no more. The actions and general appearance of the young Eagles are much as before. The chief gain seems to have been one of strength, but they are as devoid of aquiline hauteur and ferocity as ever. Nevertheless, although no such tendency is evinced at present, both should fly during the coming week.

	No. 465252	No. 465251
Weight	4061.7	2981.7

Not only has the loss of the previous week been made up, but a considerable increase over the maximum weight of two weeks ago is noted. The posterior portions of two rabbits in the nest.

May 29, 1927.—Tenth Week. When we approached the tree for the last time the adult was seen flying over a hill, but the young were gone, and the nest—empty but for a piece of gopher snake—was trampled so flat as to give it the appearance of long disuse.

In summarizing these observations it might be remarked that not only was the male Eagle never flushed from the nest, but indeed was seldom observed even in the vicinity; a circumstance which indicates that the female does most of the work involved in rearing the young.

An examination of the weekly record of weights brings to light an interesting problem. A comparison of these birds, when last weighed with the only other datum at my command, an adult male which weighed 4169.4, serves to emphasize the lightness of the

smaller bird. However, although the disparity between the two birds may be explained as indicative of a difference in sex, the larger individual being the female, yet there seems to be no adequate explanation for the simultaneous and practically equal loss of weight which occurred during the eighth week, and which in each case was followed by an identical recovery. That this phenomenon has more than a merely individual application, and is based upon some change in the relation of increased exercise to food supply, is indicated by the fact that the same peculiarity has been observed by the writer in the growth of young Screech Owls (*Otus asio quercinus*).

In this experiment the most striking feature is the singular good fortune which has attended every observation. For the first eight weeks each visit seemed to presage disaster. First it was feared that the eggs would be chilled, exposed as they were for so many hours in weather which was usually cold and cloudy. Then, when the young were small, the danger of chilling seemed even more imminent, especially on the occasion when it rained. Again, it was feared that the parents would lose patience at so many visits and desert; and once, when the youngsters had begun to run about on the ground, and continued to stagger about aimlessly when returned to the nest, it seemed likely that they would walk blindly over the edge.

In addition to this good fortune there has been much else to be grateful for, particularly the generosity of Wright M. Pierce in furnishing part of the equipment.

Pomona College, Claremont,
California.

SOME OBSERVATIONS ON THE NESTING OF A PAIR OF YELLOW-CROWNED NIGHT HERONS.[1]

BY MARGARET MORSE NICE.

The "sloo" woods, two miles south of Norman, Oklahoma, on the second flood plain of the South Canadian River, is one of the few places in that region which can be called deep woods; while most of our best bird haunts are being destroyed, this place is preserved with jealous care by the Olivers, because of their love for nature. It comprises fifteen acres of primeval trees—cottonwood, elm, black walnut, green ash, box elder and persimmon; much of the time about a fourth of the area is flooded. To some people it might seem a gloomy, forbidding spot with little but the great trees, the muddy water, the fallen tree trunks and the hosts of mosquitoes, but in reality it is an admirable and wonderful place because of the rare birds that choose it for their homes. Here it was that the only Pileated Woodpeckers we ever saw in Cleveland County wintered in 1925–26, here is the farthest west the Red-shouldered Hawk has been known to nest in Oklahoma and the most easterly record for Swainson's Hawk. This is the only place in the region where we know of the Acadian Flycatcher, the Prothonotary and Sycamore Warblers summering, while in the next patch of woods Florida Barred Owls raise their young. The most abundant breeders in these woods are the Red-bellied and Downy Woodpeckers, Crested Flycatchers, Wood Pewees, Cardinals, Red-eyed Vireos, Tufted Titmice, Plumbeous Chickadees and Blue-gray Gnat-catchers. But it was the Yellow-crowned Night Herons that held the greatest interest for me, both because of their curious ways and also because so little seems to be known of their home life.

The first *Nyctanassa violacea* in 1926 was seen in the sloo, March 20. Two pairs nested in neighboring trees about a hundred yards from the water in nests that had been used before. The upper nest, forty feet from the ground in an ash, had been adopted by

[1] Read before the 45th Stated Meeting of the American Ornithologists' Union, Nov. 17, 1927, at Washington, D.C.

April 6, the lower nest, thirty feet up in an elm, having been greatly depleted of its sticks for the benefit of the other. On April 19 there were at least eight Herons in the woods. The nest in the ash had young in it May 11 and 25, but was empty June 8; the young may have left in safety. The other nest had not been rebuilt April 25, but on May 4 a bird was incubating. On May 25 there were small young and on June 21 six enormous birds; four days later the nest was empty. The sloo had dried up completely in early June bringing to an end the ample supply of crawfish and frogs, so the parents had to fly a third of a mile northwest to Persimmon Pond for provender.

I did not find nests of the second brood; both pairs may have moved over to the pond. On May 25, Eugene Lutrell, who lived above the sloo, told me he saw Herons flying every evening with sticks in their bills from the sloo to the pond; these might have been the pair in the ash preparing for the second nesting before the first was finished. I saw no more Herons at the sloo, but on July 26, noted three adults at Persimmon Pond and on August 1 an immature bird.

In 1927 the first of these Herons was seen March 29 and the next on the 30th, while on April 5, three were noted in a pool in woods to the south of the sloo. At the time of my next visit, April 10, a pair had taken the higher of the two nests.

On this date I watched the nest from 8:00 to 9:00 in the morning seated on a log fifty yards to the east. The female[1] was sitting on the nest; at 8:02, the male flew into the tree and alighted fifteen feet to the south. In a minute he started towards the nest with his crest and the plumes on his wings erect; the female displayed also and rose; the male stepped in beside her, both dropped their plumes, the female yawned. Both stood perfectly still for twelve minutes, then the male changed his position so as to face south like his mate instead of north. The female preened her wing once. Both came to attention to watch a high-flying Dove. They both preened a very little. The female stepped out of the nest, stretched one wing, then the other; ten minutes later she slowly returned to the nest with her plumes up. Her mate

[1] I distinguished the parents by assuming that the female incubated and brooded at night and this proved to be true.

did not display but preened her a little when she entered the nest; she put her head under his breast. He stepped out and preened and scratched himself while she picked up twigs and dropped them. There is the most astonishing difference between the slim, sleek, quiet-looking Heron as ordinarily seen and the resplendent creature with all its plumes erected.

Five days later occurred one of the most interesting sessions of all with these birds. At 7:00 A.M. the female was incubating and the male standing a few feet to the south and a little above her. Suddenly at 7:19 he struck his bill straight up, and crouched down with all his plumes erected, uttering a loud whoop, then immediately returned to the standard Heron attitude. This performance was repeated nine times taking place about once a minute; the bird went through it quickly, nearly overbalancing himself sometimes as he made the very low bow. The female seemed entirely oblivious. He took a few steps toward her, looked down at her and whooped and bowed again, then preened himself, repeating the process once more. He then started to walk slowly and majestically towards the nest, while his mate watched him alertly. He gradually raised his crest and wing coverts and she did the same; when he was about two feet from the nest, she stepped off in a hurry, nearly bumping into him, and flew down to a fallen tree with her crest still up. He deliberately came to the nest, stepped in, sat down, stood up, turned over the eggs and settled down to brood.

In nine minutes she returned with her feathers up, he displaying in turn; he stepped off the nest and she on. A third Night Heron alighted ten feet below the nest, and stood there, but the others paid no attention to it.

On the 18th, I again watched from 7:00 to 8:00 in the morning but very little happened; perhaps the whoop and bow had occurred before my arrival. One bird was incubating on the upper nest and the mate was not present. Two Herons stood on the lower nest and I thought that I should see some courting, but here again I was disappointed. Occasionally one lifted its plumes a little and ran its bill along the neck and side of the other, which reciprocated in like manner. Each preened its own self, scratched its own self and yawned, but for the most part they stood perfectly

motionless. Both flew away at half past seven and I did not see them again, the lower nest remaining unoccupied this season. Life was so very deliberate at these Herons' nests that every yawn was important, every scratch an event.

On April 28 and May 5 I traversed the sloo and noted each time an incubating and watching Heron, but I dared not tarry as the mosquitoes were overwhelming in numbers and the most ferocious of any I ever had the misfortune to meet. Later they diminished in abundance and rapacity to a point where they could be endured by a bird lover fortified with fly-dope.

My next opportunity to visit the nest was from 5:00 to 7:00 A.M. on May 19, a cloudy, windy day. At 5:00 the female was standing in the nest, seven minutes later she settled down; at this time it was too dark to see her clearly. Since the leaves had come out, I had to leave my log and stand with my back against a tree a hundred feet from the Herons; of course they saw me plainly, but apparently they did not mind my presence. During the first hour the female alternately brooded and stood erect, preening herself to a small extent and apparently manipulating the young with her bill. The nest looked larger than it had been before. At 6:19 the male arrived and walked to the nest in a stately manner with his plumes up; his mate watched him but did not display. As he stepped on the nest, she picked at a twig, walked past him and flew off. He regurgitated into the bill of a young bird, working his throat muscles the while. He billed the young, poked and jabbed into the nest and settled down carefully to brood. At 6:28 the female returned and presented her mate with a slender twig, which he added to the nest; she stood a moment, turned and flew away. Neither bird displayed. At 7:00 the male was still brooding and the female had not returned. I went over to the nest tree and beneath it found four egg shells; the male looked down at me but made no protest.

Six days later I again watched from 5:00 to 7:00 A.M. finding the female standing erect on the nest. At 5:07 the male came to the tree and walked slowly to the nest without displaying, his mate in the meantime leaving; he deposited breakfast in the nest, the young fluttering their wings and rooting it up. He then left and took up his post in the tree to the south, where another

Heron was also perched. At 5:45 the female returned to the south tree, came to the nest branch and stood by the trunk five feet from the nest. The five young who were now clothed in juvenile plumage had been very quiet, but at their mother's approach they looked expectant and opened their bills. Soon however, they subsided into the nest and watching became slightly dull since it was enlivened by nothing but attacks of mosquitoes.

At 6:25 I thought something was surely going to happen, for the female shook herself and all five young appeared on top of the nest, stretched, flapped their wings and stepped about, one examining a twig; for ten minutes the nest was a scene of mild animation. However, the female merely preened herself a little; then at 6:38 stepped over to the nest and stood beside it, her offspring gathering hopefully about. A Red-shouldered Hawk screamed and all the Herons turned their heads in its direction, the young quickly disappearing. For the next half hour they rested, only occasionally lifting a head, while the parent stood like a statue beside them. It was a mystery to me how that large brood made such rapid growth when, so far as I could see, they were so seldom fed.

On June 2, late in the afternoon we visited the nest and found there six great young, nearly as large as their parents, all standing erect on the nest but one that crouched inside. One parent stood beside them, the other alighted near. We came close to the tree and this second adult ejaculated loudly *quáck, quack, quack, quack; quáck, quack, quack, quack,* for about two minutes, then fell silent. The other parent and the young were perfectly quiet.

June 4, I watched the nest from 4:55 to 6:25 A.M.; the female was standing near, two young were in the nest, two on the branch beside it and two near the female. At 5:09 the male came, displaying a little as he approached; he dropped the food into the nest where two young had a slight tussle over it. Again raising his plumes in the same manner he stepped away and sat in the next tree. The female flew away at 5:13 and returned at 6:00, stepping to the nest with her crest up; then without feeding the young, she returned to her favorite post one yard from the nest. I came near the tree and she uttered a low, grunty, *guck, guck, guck, guck,* quite different from the quack two days before. As

I walked under the nest she stepped about nervously saying "*wah, wah, wah.*" The young during this hour and a half had been practically motionless; they certainly practice their main occupation in life—absolute immobility—from babyhood up.

The chief interest of this visit, however, did not lie in the mild activities of this family group, but in the extraordinary noises made by a number of new Yellow-crowned Night Herons, that kept continually flying through the woods with loud and startling flaps, in the meantime uttering uncouth cries.

My last visit, June 7, from 6:30 to 7:30 P.M. was most rewarding. During the first 40 minutes there was little to see for the young, five on the nest and one nearby, stood like Patience on a monument and the most profitable thing to do was to record the astounding squawks that came from the visiting half dozen or more Herons.

At 7:10 the male came to the tree to the south, but did nothing at all except a little preening and scratching of his head for ten minutes; then his mate arrived. At once both displayed so near to each other that they bumped breasts and she was knocked off, alighting five feet to the west. He then went through his song and dance as he had done on April 15, the young in the meantime becoming excited, walking about, and all voiding excrement. The male whooped and bowed again while the female went near the young who climbed about from branch to branch. She then walked rapidly to the nest and stood there; four of the young hurried to it, crouched down and worked their bills in the bottom, one fluttering its wings. She disgorged twice into the nest and flew to a perch ten feet to the south while the young gobbled up their repast. The male performed once more and then flew away. I went near the nest for a last look and the female objected with a low and grumbling note—*wok, wok, wok.*

There had been so much rain this season that the water in June nearly reached the nesting tree. Mr. Fred Oliver found this pair nesting again three hundred yards to the north of their first nest, sixty feet up in an ash; on August 8 there were five large young in the nest and nearby. The other Herons could not have stayed long as he wrote he never noticed them.

As to the notes of these visitors, I recorded twenty different

utterances and the interesting point about them was their variability in pitch and tone. Some were sharp, even shrill: *wak; ick; ark; owk; yack.* A common note was a gruff, loud *owk* which I sometimes described as harsh and angry and again as very loud, sudden and disagreeable. There was a low, grunty *walk, walk, walk;* a similar *wok, wok, wok* and a subdued *guck, guck, guck,* all somewhat like the alarm notes of the nesting female. There was an annoyed *gowk, gowk;* a gruff *jack,* and a low *pedóre*—a kind of a quawk. Other sounds which I recorded without annotations were *yowk, yowk; quork, quork; wowk, qwowk; quock, quock, quock;* and *cawk, cawk, cawk, cawk.* But the best of all was a deep, low and most expressice *woe,* which was at time prolonged to *woe-ugh-ugh* and *woe-oh-oh.*

It was with a great deal of pleasure that I learned from Mr. Oliver that on June 10, 1928, there were five pairs of these Herons nesting in the woods; the young had already left from one nest, and were nearly ready to leave the others.

SUMMARY.

1. The male Yellow-crowned Night Heron has a special display when courting and during the early days of incubation, viz. a very low bow with all plumes extended and a loud whoop uttered with his bill pointed straight up.

2. The egg shells were dropped below the nest both in 1926 and 1927.

3. These Herons were very quiet around the nest, the only notes I was sure came from them were the "whoop" and four kinds of alarm notes.

4. In two cases six young were raised; in one, five. The nesting cycle from the building or adoption of the nest to the leaving of the young lasted about two months.

5. In early June of 1927 there were six or more visiting Yellow-crowned Night Herons that uttered the most extraordinary variety of squawks.

156 West Patterson Avenue, Columbus, Ohio.

SOME LETTERS OF BACHMAN TO AUDUBON.

BY RUTHVEN DEANE.[1]

THE following letters were written the first and second years after Audubon's first visit to Dr. Bachman's home. During that time many letters passed between them, and their mutual interests in studying the fauna and flora of that country, and in gathering information and collecting material to be used in Audubon's forthcoming "Birds of America" cemented an enduring friendship which was never broken.

In reading some sentences in these and other letters, it would at first give the impression that Bachman was accusing his friend of obstinacy and challenging his opinion, but before the letter ends he is apt to write "you have too much good sense to be offended either with my bluntness or my fun." In the letter dated March 27, 1833, the warbler so minutely described, became the type specimen of Bachman's Warbler which later was described and figured by Audubon.

Charleston, July 21st., 1832.

It afforded me very great pleasure to receive two letters recently from my good friend Audubon. They are always welcome whether from the city or the woods, and whether they contain information of birds, beasts, rattle snakes or men. I rejoice particularly that your good lady and sons have joined you in health and that you have been happy in each other's society once more. I hope you will be able to say 6 months hence, that the cholera is all a humbug. I look upon it as a great calamity to any country. There is no use in running unnecessary risks, and if you were not already beyond Boston before this time, I would point out to you a tract of country through which you might pass in safety and pursue your favorite pursuits. But you are, now no doubt, far beyond the reach of danger, indeed I cannot suffer my mind for a moment to dwell on the thought that your life may not be spared till you have reared for yourself and your

[1] Read before the Forty-sixth Stated Meeting of the American Ornithologists' Union, Charleston, S. C. November, 20, 1928.

country a monument of your taste, industry and talents. Go on and prosper. May your son be a bolder, and therefore a more successful, beggar than you. May the purse strings of the wealthy fly open at his approach and may fame and wealth attend you. I care not so much for the latter but it will be a comfort to you when you grow old, it will save the wife from despondency, and will either be a blessing or a curse to your boys.

We are all, thank God, quite well and wife, children, Maria[1] (our sweet heart), Dr. Wilson,[2] Ward,[3] Plato[4] and all hands beg to be remembered to you. Maria has drawn for you the Franklinia, a very pretty red Hibiscus, is preparing to do another of a white color and has also drawn a splendid Bignonia, the latter, which is very rare here, may be less so in the S. West and probably has already had the benefit of your pencil. She will not forget her instructor and I am sure will ever do you credit. She is making good progress both in ornithology and botany. I looked at a letter of hers to you, in which she makes a long apology in having given Lehman[5] some commissions and is afraid of having given you offence. At all this I laugh, knowing how little reason there was for blame or censure.

Henry Ward is an excellent fellow, modest, temperate, industrious. He comes often to see me and I go to his room every day. He boards at my sister-in-law's, Mrs Stroble's, and is quite at home. The next week he goes to the islands to stay a month. Make your mind easy about him. He has already set up 50 birds and procured a good many skins, We of course go on slowly, weather hot, few birds.

Birds—Now I am at home again. Well!, you find 9 species new to the U. S. I suppose them to be the two forms Muscicapa, the Coccyzus, the Crane, the 2 Columbas, the sparrow and the Vulture. Featherstonaugh says that 3 or 4 of them have never been named. Wilson says somewhere (allow me to quote him) that the boy who brought a handfull of flowers to his mother

[1] Dr. Bachman's eldest daughter, who married John Woodhouse Audubon.
[2] Dr. Samuel Wilson.
[3] An Englishman who had come to America to act as taxidermist and collector.
[4] A favorite dog.
[5] A Swiss landscape painter, one of Audubon's assistants whom he found in New York.

said "there are more where these came from" there are also more birds where yours were found.

Has the Spotted Sandpiper a half web on the outer toes of each foot? and does his young look about as much like him, as the young of the Blue Heron looks like his mother? Hence you will see that I am somewhat at a loss for I have no specimen of the above birds except the very fellow now before me. I killed the old male and 3 young of the new sparrow, no difference in color, and they breed here. I have for you the eggs of Wilson's Plover, *Sterna minuta* &c. and if God spares our lives [torn] we will yet add something at least to the habits of birds. I am preparing a piece on the migration of birds to read before the Philosophical Society,[6] which I would say would be at your service were it not too much like taking a minnow to a whale. Thank you a thousand times for the promised bird skins. I shall devour them with my eyes, arsenic and all. We were not the first that conjectured that the Blue Heron was white (to use a bull). I see it mentioned in Bonaparte on the nomenclature of Wilson. I have now the birds in all their changes of plumage. I was much amused at the St. Augustine paper in which the editor swears vengeance against you, calls you ungrateful, bird catcher, and the Lord knows what, for not having declared that Florida was a paradise. I send it to you as a curiosity, we have laughed heartily at it, and if you were here we would drink his health in a glass of claret and vote him an A-s-s. The books are quarantined, all I trust is safe. Have you sent the copy to the State of S. C.? What shall I say more. It is Saturday afternoon and I am preparing for the duties of tomorrow. Oh, how I wish I were with you. Let me hear from you the first gun you fire in Maine. Best respects to Mrs. A. With great respect, but in great haste

Yr. friend, Jn. Bachman.

P. S.

Now write me as long a letter as this.

(Superscribed)

J. J. Audubon Esq.
Care of Dr. Harlan.
Philadelphia.

[6] Literary and Philosophical Society of Charleston, S. C. March 15th, 1833.

Charleston Decem. 27th 1832.

Dear Audubon

I purpose filling this letter with remarks on Birds & when I have done I will send it to you. It will at least prove that although nullification may for a time dampen, it cannot altogether strangle my zeal for the Science.

I have this moment shot in my Garden, the Regulus about which we have so often disputed and although your mind is made up against me, yet you must listen like a reasonable man, we both have a spice of obstinacy. Now hear my reasons for believing it to be a new bird.

I received recently from Gibbs the old & young of the Golden crowned Wren, on comparing these Birds with several specimens I have of the present Bird, I cannot doubt their being different Birds. They are this moment before me. The Bill of the Gold crest, is thick & black, that of the present bird is at least one third less, thin Brown, Nostrils not covered with feathers as the Golden crown and its legs are brown instead of black, its bill partakes more of the Genus Sylvia whilst the other partakes of the Muscicapa. Make further observations my friend, the above are permanent differences setting aside the difference of colour. It cannot be the young of the ruby crowned wren, it is considerably smaller & differs in all its habits. The present Bird loves thick bushes, I never saw it high from the ground & never on pine trees like the other, its voice differs also very much. I am preparing by the help of Ward skins of each. Let us both resolve that we will not resist the evidence of our senses. I question much whether either the Golden or Ruby crowned wren are found in the Autumn without some colour on the head either red or yellow.

May not the Northern Marsh Hen, be the Bird which we here call the Fresh Water M. Hen & our Ash coloured one that keeps in the Marsh be peculiar to the South? I should like to have this matter ascertained. The greatest mystery in Ornithology to me is the circumstance you mention of the young of Peale's Egrett being when young some brown & others white. My bird is improving. It was white originally, is so still, which I take to be the colour of the old bird, & I hope to preserve it through the winter.

The new Fringilla of which you have a drawing has not entirely disappeared. It departs in November & returns in April. I never found a nest, but saw three & 4 young ones with the old. It undoubtedly breeds on, or very near the ground. This bird although not very rare is seldom seen, in consequence of its darting toward the earth as soon as it is approached when it runs along the bushes & in the broom grass of the pine woods & is with difficulty made to fly. It is somewhat strange that it leaves us about the time the other of the numerous sparrow family visit us & it comes to take their place as they retire to the North in the spring. It is the only high land sparrow that breeds in the lower country of South Carolina, the three salt marsh sparrows, the sea side, sharp tailed, & the new sparrow I intend to send you, breed in or near the situations which they most frequent. The present species I suspect breeds but once, of this however I am not quite certain. Next summer I shall be able to say something about the habits of the new Finch that you have not seen, & which I take to be the long lost F. Caudacuta of Latham.

The Ardea Cristata, your large White Crane's, were in—tolerable but not in the perfect plumage when I had them destroyed. Till then I kept them in my Garden, but they became dangerous, killing a Duck & on another occasion a half grown cat at a single blow & on the day I had them killed they made a pass at a young negro, this was when they were hungry. They became somewhat clamorous at night uttering the usual harsh gutteral note of their species. They managed to mount the highest arbours to sleep. Were remarkably expert flycatchers & I frequently remarked at their making a point equal to a setter before they darted on the butter-flies & Sphynxes, which they never failed to seize. Indeed this was their amusement every afternoon & evening. I question whether these birds would ever in confinement have attained to the growth of those in their wild state. I tossed a dozen Mulletts of a tolerable size to one in succession one Morning, he seized them before they reached the ground & they disappeared in an instant. In fact they were enormous gormandizers. I think I speak within bounds when I state that one could easily consume a peck of Fish in a day.

I sat down to make a note or two & here is a whole letter. It

may however contain information which you may desire & so I send it. I will keep on making remarks & hope by the first vessel to send you the long promised drawings & Birds. I write that I may not be forgotten. A letter from you, always acceptable is now a cordial. We are all well & all beg to be remembered to you & yours. Our political horizon remains dark & gloomy. The Winter Wren has been sent me from Columbia.

Yr frd

[Superscsibed] Jno. Bachman.

J. J. Audubon Esq.
F. R. S. etc. etc.
Boston.

Charleston, March 27th 1833.

My Dear Friend,

Your letter of two sheets has come to hand this moment, make no apologies for its length, you are never tedious, I hate short letters from you, I pay postage for much brass & copper & shall not object to do so for fine gold.

Now my friend what is the use of writing a whole page of apologies before you mention to tell me that I am in the wrong. I shall take the same liberty with you without an apology, promising at the same time that all your caution is right & I need not add that I am one of the last men that would willfully lead you into an error. But to the point.

1. The *Trochilus* you swear by.
2. The [* * *] *irostra*, ditto, by this time you have the skin.
3. The *Sylvia*. Now take a seat along side of me and deliberately & patiently go with me over the description & history of this beautiful bird. I have a secret to tell you in your ear, softly my friend, I have the male, it is fairly drawn, it is in full plumage. I have the skin well put up & if Maria's drawing does not suit you, you may draw it over, for the Bird was shot by Jostle[1] the third, and it is now the property of old Jostle and if he cannot swear to it I can.

I was coming from Maj. Lees & near Parker's[2] ferry heard a

[1] Dr. Bachman's familiar names for Audubon and his two sons "Old Jostle, Jostle the second and Jostle the third." The origin of the name is unknown.
[2] A location about thirty five miles west of Charleston, S. C.

soft & pleasant note that was new to me. I leapt out of the chair[1] in a crack, to use an elegant expression coined in somebody's brain. I saw the bird on the upper branches of the largest Tupelo Tree, I shot it and it lodged in the Moss. Goodbye says I & went sorrowing to my chair. 3 miles further the same sweet note like music from the spheres came over me, I saw and watched the bird for a quarter of an hour, it was slow in its movements, keeping very high & occasionally hanging under a limb like the yellow throated warbler. This time I was more successful and the bird is safe. Now for your Mourning Warbler, to which it bears about as much resemblance as it does to the Maryland yellow throat. The bird I sent you was an old female I thought I had so stated it. Now listen to me whilst I compare this bird with Wilson's Mourning Warbler which I take to be the Maryland yellow throat, I mean a variety. I hope Nuttall & his friend who have seen this bird will show us the skin, a fig for a bird in the bush if you cannot get it in the hand. Wilson's description & the Male of my new *Sylvia* are now before me, besides the difference in size & bill, the Mourning Warbler of Wilson has a slate coloured head. Mine has a broad band of bright yellow extending to the middle of the head. Wilson's bird has no yellow on the cheeks & sides of the neck mine is yellow as well as the bend of the wings. Wilson's spot on the breast is of black & white, mine is pure black. The Tail of his bird is rounded at the end, mine is deeply forked, his bird has flesh coloured legs, mine has black legs. But the bird & the drawing will be before you I hope before you leave New York. Now my friend draw this male & female, it will be an ornament to your book.

4. I can easily account for your mistake in the *Sylvias*, particularly immature or female birds, but that you should take my beautiful little *Fringilla caudacuta* for the young female of the sea side finch is almost enough to make a man strike his father. I have a dozen specimens of each of these three finches. I sent you two skins, the one was an imperfect specimen of Wilson's *caudacuta* the small and beautiful little finch is the bird I wish to bring to your notice as Latham's, *caudacuta*, I will send you the *F. Maritima*, surely you cannot think the two skins I sent you

[1] The old fashioned two wheeled chaise.

are of the same species, and as for the *Maritima*, you ought to know that it differs toto coelo. Surely you are joking with your friend. Tell Mrs. A. to stop your Grog & Wine for a month as a punishment for trying to hoax me. I will oblige you by looking for the eggs & nest, but as for farther examination about the Birds I shall not need them. Do you remember my first *Fringilla.*

5. The long legged sandpiper. What is it. Have you seen a skin of this Bird before, do you know the *T. Himantopus.*

6. The short legged sand piper. I sent you the drawing & stuffed bird. Do you know the *Tringa Pectoralis.*

7. The Bird that I sent you the skin of & a drawing is it the young of the spotted sandpiper, give me your candid opinion about these Birds, for you have not said a word about them.

8. The *Regulus*, today I have killed two of these Birds they may be the young of the Ruby crown, but I am greatly at a loss. I have killed many of these Birds in the North in Autumn, but always found what I took to be the young with some red on the head, these birds have none & are invariably ½ an inch shorter, you know how much the *regulus* family resemble each other. In another letter, in two days I will return to this subject.

9. The Marsh Hen. My opinion first expressed is every day strengthened. Bill, feet, colour all differ, Wait.

Have I not the bump of obstinacy in my head? My friend I acknowledge it, but so have you & it is a helping to us both. You have too much good sense to be offended either with my bluntness or my fun. I love to please you & I esteem & value your friendship above all price.

My views may not always be correct, but they are at least deserving of investigation.

In what way can I repay you and my friend young Jostle for your kind attention in procuring for me specimens of Birds etc. To show you how much I value them let me tell you that I have had two very fine sets of drawers made, one for water & the other for land Birds. I label every specimen & have sent to France for European Birds, your last present was highly valuable. The Blue Grosbeaks in all their states of plumage shall be sent to you & please to inform me of anything you may want. It will afford me great pleasure to oblige you. Before I forget it ought you

not to give the young of the Blue Heron in its white & spotted plumage. In this I can give you skins of every shade. Maria, (our sweet heart) sends her best respects to you & Mrs. Audubon. She is always highly gratified to do anything to please you. I assure you the approbation you expressed of her efforts in drawing birds has doubly repaid her for her exertions, and everything like most in this respect she ascribes to her Instructor. Mrs. Bachman spends a few weeks at Maj. Lee's plantation. The rest of my family are all around me in health & spirits & all hands join in kind remembrance. Tell me how you got the Box of Birds as set up by Ward? Let me hear from you often, very often & I will thank you & work for you. I am much engaged among the Animals & have found something new among the Rats & Shrews. Anything in this way will greatly aid me, there is a Canada Marmot, have you seen it? Shall we ever hear from you when you get among the snows of the North? Now can you write as long a letter as this? God bless you my good friend I am sure you are weary.

Your friend

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ON THE GENUS PHÆOPROGNE, BAIRD.

BY W. E. CLYDE TODD.

THE genus *Phæoprogne* was instituted by Baird (Review American Birds, May, 1865, 272, 283) for a group of Swallows allied to *Progne* Boie, but with a superficial resemblance to "*Cotyle*" of the same author (= *Riparia* Forster). Two species were assigned to the new genus, *P. fusca* (Vieillot) and *P. tapera* (Linnæus), which were carefully distinguished from each other, but no type-designation was made at the time. The name having been applied only in a subgeneric sense, it was ignored by later authors, until revived by Mr. Ridgway (Bulletin U. S. National Museum, No. 50, III, 1904, 26), who designated *P. fusca* as the type-species. The group seems entitled to generic separation on the strength of the differential characters pointed out by this authority and by the original describer—it rests on as good grounds, at any rate, as most of the other accepted genera of Hirundinidæ. Unfortunately there has arisen some confusion of late years with regard to the status of the included species, due to the treatment accorded them by Sharpe (Catalogue Birds British Museum, X, 1885, 180), who was under a misapprehension as to the significance of the characters shown by the series at his command. It is the purpose of this paper to clear up this confusion as to the names and ranges.

Phæoprogne tapera (Linnæus).

Hirundo tapera Linnæus, Syst. Nat., ed. 12, I, 1766, 345 ("America" = Brazil, ex Marcgrave).

Phæoprogne tapera immaculata Chapman, Bull. Am. Mus. Nat. Hist., XXXI, 1912, 156 (Chicoral, Tolima, Colombia; type in coll. Am. Mus. Nat. Hist.).

The original diagnosis of this species, it is true, leaves much to be desired in the way of details, but such as it is seems to apply to the form from eastern South America with the middle of the belly plain white, unspotted. A study of the references cited in connection with the name would seem to confirm this view—

with the exception of that by Sloane, which of course pertains to some other species (cf. Baird, Review American Birds, 1865, 286, note). In my opinion, von Berlepsch and Hartert (Novitates Zoologicæ, IX, 1902, 74) were accordingly perfectly justified in fixing eastern Brazil (ex Marcgrave) as the type-locality of *tapera*. At any rate, all our specimens from French Guiana and the lower Amazon Valley belong to this form, and according to Sharpe and Wyatt (Monograph Hirundinidæ, II, 1894, 481), in a series from Bahia, Brazil, "not a single one has a trace of spots on the breast," nor does Doctor Chapman record any of such a type from this general region (Bulletin American Museum Natural History, XXXVI, 1917, 503–4). It is fair to presume, therefore, that the plain-breasted type of *Phæoprogne* is the only one found in eastern South America, and this circumstance would of itself suffice to fix the name *tapera* on this form.

Doctor Chapman, however, under the impression that the spotted-breasted bird was *tapera*, proceeded to give a new subspecific name to the plain-breasted one, calling it *immaculata*. He supposed at first that the latter was confined to the northern part of the continent, and later on was greatly puzzled to discover that both forms occurred in Colombia, and that, too, without any indications of intergradation. He admitted that they behaved as if they were two different species, but left the question in abeyance. The fact is, as shown beyond, that these two types of coloration represent two closely allied but perfectly distinct *species*, as correctly given by Baird (l. c.) many years ago, and more recently recognized by Mr. Ridgway (Bulletin U. S. National Museum, No. 50, III, 1904, 26, note). Sharpe's remarks in his monograph and in the Catalogue of the Birds in the British Museum (Volume X, 1885, 181) are evidently responsible for the confusion of these two forms under one name. Age and season have nothing to do with the case.

Specimens examined (Carnegie Museum).—Venezuela: Maripa, 4; Altagracia, 2; San Felix, 2; Sabana de Mendoza, 1; Tabay, 4. Colombia: Calamar, 1; Lorica, 14; Monteria, 2. French Guiana: Mana, 7. Brazil: Miriti-tuba, Rio Tapajoz, 16; Santarem, 1; Nova Olinda, Rio Purús, 6; Arimã, Rio Purús, 1. Total, 61.

Phæoprogne fusca (Vieillot).

Hirundo fusca Vieillot, Nouv. Dict. d'Hist. Nat., XIV, 1817, 510 (Paraguay, ex Azara).

Sharpe and Wyatt (Monograph Hirundinidæ, II, 1894, 481) remarked the variations in their series of what they called *Progne tapera*, but attributed it to season, saying that "the ovate drops of dark brown colour on the breast are developed to a greater extent during the breeding-season, if indeed they are not the principal evidences of nuptial plumage. They are never seen in young birds." Following these authors, recent writers have failed to realize the true significance of these markings, while Doctor Chapman (l. c.) undertook to show that they were of at least subspecific value. As already said, he retained the name *tapera* for the bird with the spotted breast, and gave a new name, *immaculata*, to the bird with the plain breast, which he supposed was restricted to northern South America—Colombia and Venezuela. That his action in this regard was quite superfluous I hope to be able to show. *Hirundo fusca* of Vieillot was based on the "Golondrina de la parda" of Azara (Apuntamientos, II, 1805, 505, 301), from Paraguay. Now, the spotted-breasted form of *Phæoprogne* is the only one known to occur in Paraguay, Argentina, Bolivia, and Matto Grosso, and moreover, Azara's description seems clearly to imply that he had a bird of this type in hand. On the other hand, as I have already shown, the plain-breasted form is the only one known to occur in eastern Brazil, the accepted type-locality of *tapera*. Not only so, but the description of the latter seems to have been based on a bird of that type. Consequently *immaculata* Chapman falls as a pure synonym of *tapera* Linnæus, while the spotted-breasted bird will have to be called *fusca*, as correctly indicated by Baird many years ago.

Later Dr. Chapman (1917), finding that the spotted-breasted bird occurred in Colombia, within the range of the other form, came to doubt his previous interpretation of their characters, suggesting that, if not two distinct species, they must be individual variants. He had a single bird from Suapure, on the Caura River, Venezuela, which was of the spotted-breasted type, while all the others from the same region belonged to the other type. (I have examined this specimen, No. 73,622, Collection American

Museum Natural History.) Our birds from the Caura are all plain-breasted, but we have four perfectly typical skins of the spotted-breasted form from farther north (El Trompillo, Carabobo), and two from Guachi in the State of Zulia—all of which are exactly like the series from Bolivia. There can be no doubt but that the two types are specifically distinct, and that their respective ranges overlap over an extensive area. I am unable to verify any of the distinctive characters given by Baird except the spotting on the middle of the breast and belly, but I find another good character in the length of the wing-tip (i. e., the distance between the tips of the longest secondaries and the tips of the longest primaries in the closed wing), which is constantly longer in *fusca* than in *tapera*, by 10 mm. or more, although the wings themselves are about the same length in both. The wonder is, of course, that two species so closely allied as these, which must have had a common origin, should occur together over so large an area without mixing. Possibly they may have different haunts and habits.

Specimens examined (Carnegie Museum).—Bolivia: Puerto Suarez, 6; Buenavista, 17; Rio Surutu, 4. Venezuela: El Trompillo, 4; Guachi, 2. Total, 33.

Carnegie Museum, Pittsburgh, Pa.

HOW CAN THE BIRD-LOVER HELP TO SAVE THE HAWKS AND OWLS?

BY GEORGE MIKSCH SUTTON.

SPORTSMEN and farmers, generally speaking, continue not to be in favor of protecting Hawks and Owls. The bird of prey is regarded chiefly as an enemy of game and poultry. A few of us, who consider ourselves open-minded bird-lovers, foresee that certain Hawks and Owls will be exterminated unless we can plead their cause powerfully and promptly. The bird-lover, if he is sincerely interested in preserving these beautiful creatures, will recognize that certain steps must be taken, certain feats accomplished, if he is to win this cause.

If the bird-lover is ever to convince the sportsman and farmer that certain birds of prey should be protected, he must know not alone the problems of the birds of prey, but also the problems of the sportsman and farmer. He must recognize in the average sportsman the embryonic naturalist, who seeks an outlet for his interest in Nature through activity in the hunting season; he must recognize the deep desire to protect, first of all, the game birds and mammals which are so dear to the hunter; he must remember that, after all, it is the presence of sportsmen with their interest in wild life, and their license money which is put to work, that has made any general system of wild-life conservation possible at all. He must recognize in the farmer a similar altruism, coupled with a desire to make a comparatively strenuous existence yield proper returns each year.

The bird-lover must recognize the power of tradition which helps to make predatory creatures unpopular. Even today the Eagle which carried off babies has not been forgotten; and the bright, fierce eyes of the smallest Hawk will cause many of us racially to remember the times when we were preyed upon by prowling beasts. Anyone who has witnessed the capture of a bird or mammal by a Hawk or Owl will readily understand the widespread sympathy which is felt for the defenseless creatures which are captured by organisms more powerful than themselves,

and the corresponding antagonism, which often mounts to genuine hatred, toward these fierce pursuers.

The bird-lover must remember that to the general public arguments must be offered which will not sound like sentimentality; he must learn studiously to avoid terms which will bring any smile of indulgence; he must, in other words, be a good physchologist, and use all the forces within his reach in dealing with a problem which requires comparatively subtle handling.

Bird-lovers must not antagonize sportsmen by calling them brutal, bloodthirsty killers, when they are not; we must not call farmers inhuman simply because these farmers have a desire to protect their stock by killing what they consider the enemies of the stock.

I do not mean to suggest that our plea should be based entirely upon what we know to be the economic value of many of these birds of prey, although these data are valuable indeed, and a judicious use of them will strengthen our position greatly. We may direct our appeal to the average altruism of our listeners, however, if we use care, and this type of appeal, if it be wisely handled, will probably prove most satisfactory in the end.

The genuine naturalist regrets of course that it is necessary to offer any arguments at all in behalf of preservation of any bird. He feels that every creature has a right to exist; he resents any interference of Man in the scheme of Nature, forgetting at times, perhaps, that Man is, himself, one of the most important features of the scheme of Nature. He undertakes the task of establishing the fact of the economic value of any bird or mammal with a certain unhappiness, for he realizes that such arguments are needed to convince those whose love of Nature is not as intense as his own. Nevertheless thorough investigations have been made and extensive data have been gathered concerning the economic status of our birds of prey.

Sportsmen and farmers usually admit that they do not desire the absolute extermination of any bird or beast of prey, so long as its presence does not directly endanger human life. This attitude of mind is fair, and with such an audience we may well take pleasure in pleading our cause.

In Pennsylvania the species which needs most attention now

is the Duck Hawk, a few pairs of which nest in our mountains, along the rivers.[1] The Red-tail is in many sections becoming too rare, though it is holding its own fairly well. The fact that the Duck Hawk is a killer is widely recognized. In the most emotional pleas for bird protection the Duck Hawk is conceded to be one of the "bad" Hawks. How can we bird-lovers, in such a case as this, which needs our attention, state our arguments so forcefully and so fairly that we will be heard? How can we, to state the matter as a definite issue, secure protection for the Duck Hawk in spite of the fact that we know the species is destructive and in view of our knowledge that Pennsylvania's 600,000 sportsmen will do almost anything possible to protect the game of which they are so proud?

The bird-lover should find such a task fascinating. He convinces himself of the rarity of the bird; he knows that the creature embodies, in a magnificent way, a wilderness that is being replaced by a complex civilization; he acquaints himself with the historical significance of the bird, and its association with the sport of princes; he knows, also, its consistently "bad" habits.

A plea for the Duck Hawk's preservation may well center in a study of the deepest desires of the human race,—the desire for happiness, for beauty, for interesting experience. The sportsman who recoils a little at being told that Duck Hawks should not be killed because "every creature has a right to live," or because "it is wrong to take a life which we cannot give back," may even thrill at the sudden realization that he may more thoroughly enjoy Pennsylvania's out-of-doors if during the course of his journeys through our wilderness he may have the opportunity of seeing alive a rare and muscular creature—one of the swiftest, most nicely balanced and beautifully colored birds in existence. He will value the bird when he knows its actual standing from the scientific and sporting standpoint. I wonder how many sportsmen would care to sanction the extermination of a creature thought by many to be the most perfect flying organism which Nature has yet evolved, in spite of the fact that this same bird takes a daily toll of birds as food? Most sportsmen, if they fully

[1] The Raven, which is also very rare, has been protected in Pennsylvania since May, 1923.

sensed the rarity of such a creature, would grant it protection at once. Sportsmen do not realize that the listing of this species among the unprotected birds of Pennsylvania is *at this moment* sanctioning the extermination of the Duck Hawk. The species is so rare now that the possibilities of its survival are doubtful.

If it is necessary to bring into use any argument from the economic standpoint we may, in perfect faith, state that virtually all the birds which are captured by the Duck Hawk are abundant species much better fitted to succeed in the race for survival than the Duck Hawk. Examination of Duck Hawk ledges has shown that domestic pigeons, Meadowlarks, Robins, Blue Jays, Flickers, and an occasional water-bird are the principal prey of the Duck Hawk in Pennsylvania. These species are all common, well equipped by Nature for a fight against greater odds than the presence of a few Duck Hawks. There are probably ten thousand Meadowlarks for every Duck Hawk in Pennsylvania; Robins are even more abundant. Why is it, the naturalist asks, that the Duck Hawk's extermination must be sanctioned, when its presence makes so little actual difference to the total population of the species upon which it preys? Obviously the fact that the Robin's food habits are not particularly commendable has no effect on that bird's popularity, though the protection we give it will permit it to become too abundant for its own good, while the Duck Hawk slowly but surely disappears. The general public, after all, has but little idea of the vital problems of wild life. The public does not know that the Robin, for instance, is exceedingly adaptable to changes of environment; that it is almost omnivorous, capable of bringing forth two or three broods of young every year, and otherwise perfectly able to care for itself as a race, whereas the Duck Hawk is handicapped at the outset by its comparative rarity, its small, single brood of young, its rigorous existence, and its inability to adapt itself rapidly to changing conditions. The fact that the Duck Hawk is just as beautiful a bird as the Robin has little bearing upon the problem. The comparatively innocuous Robin is, of course, a popular bird; the Duck Hawk is unpopular.

If birds of prey are to become popular a better understanding of biology is needed. The killing of organisms for food as an

activity necessary to the perpetuation of life, must be more clearly apprehended. No one cringes at the thought of the death of an unpopular caterpillar when a Cuckoo snaps it up; yet life to a lowly organism, biologically speaking, may be just as precious as it is to higher forms. Birds of prey will be better understood when it is realized that the pursuit of food throughout the world demands essentially the same furious conflict among all creatures.

If we sense, therefore, that death is an established necessity, and remember that Nature has provided a tremendous oversupply of lower forms so that the higher forms, as we think of them, may live, then we begin to see the possibility of preserving many forms of wild life alongside each other. It will be understood, for example, that the presence of so striking and handsome a creature as the Duck Hawk will demand the lives of many smaller birds annually; and this will cause us no perturbation, for we will know that the smaller birds are increasing rapidly enough to perpetuate themselves without difficulty, while the Duck Hawk, too, may survive.

The public must be brought to a realization of the fact that great beauty is to be found where mere prettiness does not exist; that the soaring of the wide-winged Hawks, their discordant cries, their mottled plumage and gleaming eyes, are just as truly beautiful as the fluttering flight, cheerful songs, and sweet faces of our smaller bird neighbors. Surely, an appreciation of the beauty and majesty of these birds of prey does not demand a special spiritual endowment of some sort!

Those of us who sense this beauty want our friends to enjoy these birds with us. We bird-lovers are willing to aid in the control of birds of prey, when they are so abundant that their presence endangers the status of another bird. When Goshawks are so plentiful that Ruffed Grouse are being exterminated by them, we sense the justice of eliminating the Goshawk to the point of safety for the Grouse. But we want to make sure, also, that destruction of these fine predators does not go so far as to endanger their own existence as a race.

I have felt for years that every small town in Pennsylvania should have its pair of Red-tailed Hawks and Great Horned Owls. The presence of the Hawks as they soar about in the spring sun,

the hooting of the big Owls on February nights,—these are the just heritage of any American boy, a heritage which we have no right to withhold. Two Red-tailed Hawks, two Great Horned Owls—a pair of Screech Owls, of Sharp-shins, a Sparrow Hawk family or two—these are about all the birds of prey an average town may possess today—and these birds will not, according to the results of our open-minded investigations, exterminate any of the game so long as hunting is properly controlled and limited to a comparatively brief season. If no laws exist, if unrestricted shooting by human beings goes on, there is a danger of exterminating game, it is true; but our game is reasonably well protected, nowadays, from vandalism, and the price our countryside pays for the possession of a few of these magnificent birds of prey is so small that we should be more than glad to pay it, while we may.

It is our problem, as bird-lovers, to give the public the opportunity of sensing this. Without guidance they will continue to have false notions concerning birds of prey. If we criticise them too openly, or demand too abrupt a change of thought we run a considerable risk of being considered fanatical. By degrees, however, we will cause our friends the sportsmen, and our allies the farmers, to sense that there is room for all in a world so generously proportioned as that in which we live.

The fact that most birds of prey have either entirely innocent, or decidedly beneficial food habits will, of course, be unknown to many of our audiences. The fact that year-round examinations of Red-tail stomachs has shown that this species is largely beneficial rather than harmful will, of course, upset many preconceived and long entertained notions. But I am hoping that we may gradually free our plea from arguments based upon materialistic statements.

Our deepest, most sincere reasons for protecting wild-life are not, after all, based upon economic values. If we can make the public sense the need for these magnificent creatures in every one's experience, the preservation of birds of prey which are now too rare will become an important and fascinating feature of the wild-life conservation movement.

Game Commission,
Harrisburg, Pa.

RARE BIRDS IN CINCINNATI COLLECTIONS.

BY AMOS W. BUTLER.

THERE are three collections in Cincinnati that are of interest to Indiana ornithologists. Each has an interesting history and an extensive scientific library. These three are the collections of Mr. Charles Dury, of the Cincinnati Society of Natural History and of the Cuvier Club, now the Cuvier Press Club.

Mr. Dury has been a collector and student for more than sixty years. He has preserved a large number of birds, some of them from Indiana, that have become rare or are now not found within the limits of our state.

The Cuvier Club was originally composed of an enthusiastic group of sportsmen who made trips to well-known hunting grounds. Two of their favorite localities in Indiana were the Kankakee Valley and White County. To these, fifty or more years ago, they went regularly and whenever they found rare specimens to add to their collection they had them mounted. That work was done by Mr. Dury, who was an excellent taxidermist.

The Cincinnati Society of Natural History was at its best forty to fifty years ago and its collections include many interesting specimens from the Ohio River region and along the Ohio-Indiana State line, besides some from within the limits of the latter state. The most important contribution to its ornithological material is the collection of Dr. Frank W. Langdon, one of the early students of birds in the vicinity of Cincinnati.

Recently I spent two days in Cincinnati and had the opportunity of looking through those collections with Mr. Dury. From them I made many notes to some of which I herein refer. I have prepared these records because they should be printed and preserved.

Doubtless there are other specimens in these collections of special interest to Indiana students of birds that would be disclosed by a more extensive search.

BIRDS IN CHARLES DURY'S COLLECTION.

Dendroica kirtlandii. KIRTLAND'S WARBLER.—Male. May 4, 1872; Avondale, Hamilton County, Ohio. Charles Dury. "Two birds seen;

thicket of low bushes." This is one of the early records of this rare and interesting bird which has more recently been taken in Indiana.

Protonotaria citrea. PROTHONOTARY WARBLER.—English Lake, Ind., July 28, 1891, R. Hazen. Breeding abundantly at English Lake in Woodpecker holes in willow trees. Birds had an appreciation of beauty. They used bright colored feathers of the Wood Duck in their nests. (Dury). There are four other specimens of this warbler in the collection from the same person on the same trip.

Loxia leucoptera. WHITE-WINGED CROSSBILL.—One specimen, Michigan City, Indiana, March 28, 1883; J. W. Byrkit. There are two specimens of this species in the Cuvier Club collection from the same person, same place and date, donated by Charles Dury.

Loxia curvirostra minor. RED CROSSBILL.—Two specimens, Michigan City, Indiana, March 28, 1883, J. W. Byrkit. There is a specimen in Cuvier Club from Mr. Byrkit taken at the same time. Both species of Crossbills were found in great numbers at Michigan City, Indiana, in the spring of 1883. The latter was much the more common. Many specimens were sent by Mr. Byrkit to Mr. Dury, who prepared them and supplied the Cincinnati Society of Natural History, the Cuvier Club and Dr. Frank W. Langdon with specimens. The same year Redpolls and Pine Siskins were common there.

Pisobia bairdii. BAIRD'S SANDPIPER.—Female. Vicinity of Cincinnati, Mouth of Little Miami River (Dury), October 27, 1878.

Squatarola squatarola. BLACK-BELLIED PLOVER.—Male. Hamilton County, Ohio, September 21, 1879. Killed near mouth of Little Miami River by Charles Dury.

Steganopus tricolor. WILSON'S PHALAROPE.—Male. No. 776. Lake County, Indiana, May 23, 1871. C. E. Aiken. A specimen, female, in the Cuvier Club collection, No. 1288, Kouts, Indiana, April 30, 1890. J. W. Gano.

Numenius borealis. ESKIMO CURLEW.—March 15, 1879. Indiana. Mr. Dury says: "A party of Cincinnati shooters brought it back from near Chalmers, Indiana. It was tied in a bunch of Wilson's Snipe. I recognized it and mounted it." There are two specimens, Nos. 346 and 347 in the collection of the Cuvier Club, labeled "Indiana."

Hesperiphona vespertina. EVENING GROSBEAK.—Male. March 6, 1911, Glendale, Hamilton County, Ohio. Mr. Dury says: "A flock of twenty-two came in March 1911, and stayed until early summer. They remained in one place until breeding time and suddenly left. Only about eight specimens were taken." He has two other specimens from the same flock, a male and female; from C. Allen, Hamilton County, Ohio, June 8, 1911.

CUVIER CLUB.

Ectopistes migratorius. WILD PIGEON.—Male. Indiana. From Charles Dury, February 1879 (No. 127). Mr. Dury has two in his col-

lection, a male and a female, both from Avondale, Ohio, March 7, 1878. "Birds very abundant in spring and fall. Shot in beech woods on Mitchell Avenue." Mr. Dury says "Wild Pigeons nested once in scattered pairs in tall trees in Estes Woods five miles from Avondale, Hamilton County, Ohio. I saw the young birds which were scarcely able to fly in August in the early '70's."

Nyctea nyctea. SNOWY OWL.—Female. (No. 242). English Lake, Indiana, 1877, L. A. Harris.

Phalacrocorax auritus auritus. DOUBLE-CRESTED CORMORANT.—Male. English Lake, Indiana. J. W. Beezley.

Chen hyperboreus nivalis. SNOW GOOSE.—juv. Indiana near Chalmers.

Olor buccinator. TRUMPETER SWAN.—Taken twelve miles below Cincinnati on the Ohio River, in December 1876. Three seen. Max Wocher.

Numenius americanus. LONG-BILLED CURLEW.—Male. A specimen in the collection from Indiana, marked English Lake. Cuvier Club 351.

Limosa fedoa. MARBLED GODWIT.—Four specimens marked "Indiana." Mr. Dury says it was formerly abundant at Chalmers.

Limnodromus griseus scalopaceus. LONG-BILLED DOWITCHER.—Female. April 30, 1890, Kouts, Indiana, No. 1287. J. W. Gano. There are two other specimens of this species in the collection marked "Indiana."

Bartramia longicauda. UPLAND PLOVER.—The collection contains three Upland Plover marked "Indiana." Mr. Dury understands they were taken near Chalmers. He has in his collection skins and eggs of this species taken at that place.

Recurvirostra americana. AMERICAN AVOCET.—No. 374.—Calumet [River?] Illinois.

Elanoides forficatus. SWALLOW-TAIL KITE.—Male. Price Hill, Hamilton County, Ohio.

Gavia stellata. RED-THROATED LOON.—Mouth Little Miami River, (Hamilton County, Ohio). No. 1337. Cuvier Club.

Colymbus auritus. HORNED GREBE.—Two specimens, 28 and 29, Cuvier Club. English Lake (Indiana). J. W. Beezley.

Pluvialis dominicus. AMERICAN GOLDEN PLOVER.—Three specimens (399, 400, 401), two of them nearly full plumaged. Cuvier Club. "Indiana." Beezley and Carlisle.

Chen caerulescens. BLUE GOOSE.—"Indiana." J. W. Beezley. Cuvier Club, 299.

Grus mexicana. SANDHILL CRANE.—Male. Indiana. L. A. Harris. Cuvier Club, 438.

Pelecanus erythrorhynchos. WHITE PELICAN.—Sternum. Aurora, Indiana. About September 20, 1877. J. W. S(horten). Dr. F. W. Langdon collection. Possibly Mr. Shorten, who was a well known taxidermist, mounted the bird for some customer and it is still preserved.

Sterna caspia. CASPIAN TERN.—While it has been reported in Indiana and verified by specimens from the vicinity of Lake Michigan,—one of which I have, Miller's, Ind., September 27, 1898, F. M. Woodruff—records from the interior of the states between the Great Lakes and the Ohio River, are of interest. There are two of these birds in the Cuvier Collection; 113, Female, Ross Lake, Ohio, October 9, 1883, from Mr. Rosa; 114, Little Miami River, Hamilton County, Ohio, October 16, 1883. A. Starbuck. Cuvier Club.

Larus franklinii. FRANKLIN'S GULL.—I add here a recent note from Pierce Brodkorb, Chicago, Illinois: "In the collection of Mr. J. Grafton Parker, Jr., now deposited in the Field Museum (Chicago) is a female Franklin's Gull, taken at Liverpool, Indiana, May 3, 1898." So far as I can recall this is the first record for Indiana verified by a specimen.

52 Downey Ave., Irvington,
Indianapolis, Ind.

UNUSUAL BEHAVIOR OF BARN SWALLOWS.

BY FLORENCE K. DALEY.

ON the 15th of May, 1927, we travelled over mountain roads to our cabin in Frost Valley, at the foot of Slide Mountain, in the heart of the Southern Catskills.

On the following morning a pair of Barn Swallows attracted my attention, flying around the porch of "West Wind," darting under and out with such regularity that I watched them to determine, if possible, the reason for their actions.

For a number of seasons past a pair of Barn Swallows nested and raised their young in a disused barn, a hundred odd yards from our cabin, but it seemed improbable that they should choose to change their previous home site and consider our porch instead; this, however, was just what they were doing, as I learned through careful and constant observation.

On May 17, the corner-stone was laid, with mud gathered within my sight, and plastered under the eaves of the Westerly porch. They worked industriously for several days, and then upon the arrival of week-end guests, the home builders, disturbed by many strange noises stopped work.

When the guests left, the Swallows started another nest quite close to the original one, and directly over the window of our "pantry." Here they worked, until the second home was well on its way to completion, only again to be disturbed and disgusted by the arrival of other house guests. These Swallows were determined, optimistic and quite certain that their home was to be under the particular eaves selected, for when the above mentioned guests decided to leave, the Swallows started all over; choosing the third site (for luck) directly over the door and again high under the eaves. At this stage I decided that they should not again be disappointed; they had won my admiration and coöperation. The door was closed and bolted, so to remain until their young had left the nest.

The Swallows seemed to sense my protection because from that time, the excited, nervous twittering ceased for the soft low sweet notes that indicate a happy family. The nest was com-

pleted; the female settled down and quiet days followed. The male chose his perch two feet below and a foot to the left, and spent his time, for the most part, keeping his eyes on proceedings above. At approximately regular intervals he fluttered up and instantly the good wife was away for exercise and food while he "carried on." Their mutual devotion was something to wonder at.

When four youngsters were hatched the parent birds divided all household duties.

On the sixth day, I climbed a ladder, made the acquaintance of the tribe and banded them.

Then followed the time for photographs, but the nest was so close to the eaves that the negative showed nothing except the nest. I then decided to move the nest and young, down to a spot where it would be in a stronger light, yet firm and safe behind a wooden bracket, which, with others, had been placed there for a fishing rod rack. This was done successfully. The parent birds were not in evidence during the operation. When they returned and missed the nest, their behavior was most interesting, flying and clinging to the spot where it had been, even though their four youngsters were not more than two feet under them with mouths opened wide, calling for food. It was three or four minutes before discovery was made and harmony effected. Light, insufficient for speed to secure satisfactory negatives, decided me to take nest and fledglings into the open. They had no apparent objection and all snuggled down for a nap. At the click of the camera, however, two awoke to the fact that they had wings for a purpose and flew strongly into the orchard, across the road and into a thicket of shrubs and vines, parents following. We sought in vain for them, in the meantime, having replaced the nest containing the two left to me. Consider my astonishment when the parent birds returned to the nest and took up their usual routine of feeding, in spite of the incident which had been so exciting and disappointing to me.

That evening, at dusk, going out on inspection I found one parent Swallow watching over the two little ones. Hitherto, the pair had not been separated at night, perching side by side, on the ends of an old horseshoe I had earlier arranged for them, so I felt rather depressed.

For two days the two in the nest were regularly fed by both parents, but no signs of those others who had begun their adventure. At night, one parent only, would keep watch on its horseshoe perch. It was a help to feel that the other was also on guard.

On the third morning, I heard flutterings of wings with much twittering and hastened out to see four fledglings in the nest, being fed, and the parents fluttering over them. That night they sat side by side on their horseshoe and I was very happy.

Early the following morning the four flew away into the orchard with the adults. I confess that I rather forlornly turned away repeating to myself, "Let nothing make thee sad, fretful or too regretful."

That night I wandered out, from force of habit, I think, to the nest. A joyous surprise awaited me, for all four little ones were there sleeping peacefully and the parents on the horseshoe.

It is not the habit of Swallows to return to their nest and use it as a home—after having once left it—and this characteristic, if true, constitutes the unusual behavior of my particular family.

After July 16 the six of them left each morning and returned at dusk rarely varying the time, fifteen minutes around six o'clock.

During the early days of flight they remained sufficiently near to permit observation, flying strongly, resting at intervals on the peak of the cabin roof and being fed by the providers. At this period in their development I heard, one morning, an unusual twittering on the roof which proved to be caused by the arrival of five other fledglings (banded) all perched in a row on the easterly side of a center chimney while the "West Wind" crowd had chosen the western side from the first time they used the roof peak as a rendezvous. The entente was cordial, and the four adults had little time for anything else than supplying insects for nine hungry youngsters.

"Wildcat Mountain" is southerly from West Wind across the "Beautiful Neversink" and as I had banded the group of five inside a deserted cabin at the foot of the mountain, I identified them as "Wildcatters" from our West Wind product. As days passed and each evening saw the return of my four with their parents, it was very evident that one nest was not quite big enough to give what I considered comfort to the well grown birds as I

noticed that at retiring time there was much fussing before all were tucked away, and when one preferred to perch on a nail above the horseshoe, a parent would invariably demand the young one's return to the nest, so I visited my "Wildcatters'" nest, and finding it deserted, took possession, and arranged it on a parallel and about two feet from the other one, thinking my four would divide up and have a bit more room.

I waited with keen anticipation for the evening and return of the family. About sundown they came speeding; mere dots when first I saw them, wheeling, gliding with infinite grace to their last dart beneath the porch and home. And those Swallows went to the new nest, fussed and settled, and thereafter the old nest was discarded.

By this time they were fully grown and their days spent far afield, but night found them at home. From July 16 to 28, out in the morning and back at night.

July 29—There was no homecoming.

"O Spring time sweet!
With silent hope their coming I shall greet."

Oliverea,
Ulster Co., N. Y.

NOTES ON SOME BIRDS OF THE CHISOS MOUNTAINS OF TEXAS.

BY JOSSELYN VAN TYNE.

DURING the summer of 1928 it was my privilege to accompany an expedition from the University of Michigan Museum of Zoology to the Big Bend region of Texas. The party consisted of Frederick M. Gaige, Helen T. Gaige, and the writer, to whom was left the ornithological work of the expedition. The work was supported by William G. Fargo of Jackson, Michigan.

We established our base at Glenn Spring, 84 miles south of Marathon. After collecting about Glenn Spring we made a trip up into the Chisos Mountains, where we made camp at Upper Juniper Spring at an elevation of 5,000 feet. There we spent June 29, July 5 to 23, and July 31. Our camp was just within the edge of the forest which extended from that point up to the tops of the highest peaks at nearly eight thousand feet. Below 5,000 feet the vegetation and bird life are like that of the surrounding desert country. I shall concern myself here only with the more interesting species of birds found in the Chisos Mountains above 5,000 feet.

The birds of the Chisos Mountains were first investigated by a party from the U. S. Biological Survey which spent the period of May 31 to June 24, 1901 in the mountains, collecting principally, I understand, in Pine Canyon. The most important records they obtained were very briefly summarized by H. C. Oberholser (Auk 19, pp. 300–301) but his full report still awaits publication by the government. An account of the flora of the Chisos Mountains and a list of the Transition Zone birds is included in the "Biological Survey of Texas" (North American Fauna No. 25. 1905) by Vernon Bailey. Early in July, 1904, Thomas H. Montgomery, Jr. made a two day collecting trip into Green Gulch (4700 to 6000 feet) and later published an account of the birds of the region (Auk 22, pp. 12–15). The topography of the region and the place names used here are shown in the Chisos Mountain Quadrangle map published by the U. S. Geological Survey (1905).

Columba fasciata fasciata. BAND-TAILED PIGEON.—Rather common. By July 31 they had come down to Juniper Spring in considerable numbers to feed on the ripening acorns.

Balanosphyra formicivora formicivora. ANT-EATING WOODPECKER.—Very common from the lower limit of trees to the top of Emory Peak. By July 31 they had completed their molt.

Aëronautes melanoleucus. WHITE-THROATED SWIFT.—Seen in numbers about the higher peaks and cliffs. Occasionally they strayed down the valleys as far as 5,000 feet.

Cyanolaemus clemenciae clemenciae. BLUE-THROATED HUMMINGBIRD.—Of regular occurrence in the dark forested canyons. I collected six adult males and, with the help of James L. Peters, have compared them with the series from Arizona and from Mexico in the Museum of Comparative Zoology. The Chisos Mountain birds prove to be like the Mexican form and not like *bessophilus*.[1] of Arizona. My specimens are exactly like Mexican birds in color and only show an approach to *bessophilus* in their smaller average bill length. But the bill of this species, as in many Hummingbirds, is apparently quite variable in size.

Selasphorus platycercus. BROAD-TAILED HUMMINGBIRD.—I collected an adult male July 18 at 5,500 feet. *Archilochus alexandri* was common in the mountains and was the only other Hummingbird collected.

Empidonax difficilis difficilis. WESTERN FLYCATCHER.—A pair and four young just out of the nest were seen July 19 at Boot Spring (7,000 feet). A few days later two were collected and others seen there.

Aphelocoma sieberi couchi. COUCH JAY.—Very common everywhere in the forest. When we arrived they were already in flocks of twenty-five or more of old and young. The old birds were molting heavily throughout our stay. They were very noisy, constantly repeating a shrill, rasping *scree, scree, scree.* I also heard them give a peculiar rattling note, not unlike the call of *Dryobates pubescens.* Their food consisted mainly of coleoptera and orthoptera, together with a few nuts and seeds. They probably also raid the nests of small birds, for I saw them repeatedly pursued by Scott's Orioles and Mockingbirds whose nests they had approached.

Aimophila ruficeps eremoeca. ROCK SPARROW.—Fairly common. On July 9 and 18 I saw females nest building and on July 22 I collected a fully fledged juvenal.

Pipilo maculatus montanus. SPURRED TOWHEE.—Common above 7,000 feet. A few were seen at 6,000 feet and one at 5,500 feet.

Hedymeles melanocephalus. BLACK-HEADED GROSBEAK.—In full song as late as the third week in July. Fairly common but amazingly wild.

(Piranga hepatica. HEPATIC TANAGER.)—Fairly common and in song throughout our stay, but so wary that I was unable to collect a specimen.

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[1] Oberholser—Condor, vol. XV, p. 181, Sept. 1918.

Piranga ludoviciana. WESTERN TANAGER.—I collected a female at 5,000 feet and saw an adult male at 5,500 feet. Not previously recorded from the Chisos Mountains.

Vireo huttoni stephensi. STEPHEN'S VIREO.—Rather common at Boot Spring (7,000 feet) where we took several adults and on July 18 a juvenal.

Vermivora crissalis. COLIMA WARBLER.—On July 20 Mr Gaige collected an adult male of this very rare Warbler near Boot Spring. The specimen is exactly like those in the Museum of Comparative Zoology taken by W. W. Brown in Tamaulipas, Mexico, at the same time of year. This is apparently the twelfth known specimen of the species (Bangs—Auk 42, p. 252) and constitutes an addition to the American Ornithologgists' Union 'Check-List.' The most northern previous record is an adult taken in the Sierra Guadalupe, Coahuila, Mexico, by Nelson and Goldman.

Setophaga picta. PAINTED REDSTART.—Another interesting discovery was the addition of this species to the known avifauna of Texas. In the forest about Boot Spring it proved to be fairly numerous. We collected two adults and on July 19 a juvenal bird. On July 21 I saw a young one just out of the nest and barely able to fly. The species was seen only in the heavy pine and cedar forest at 7,000 feet. As they hunted insects in the pine trees their actions were often very Creeper-like, but with the additional spreading of the tail so characteristic of *S. ruticilla.*

Toxostoma crissale. CRISSAL THRASHER.—On July 17 I collected an immature bird at 5,500 feet in Juniper Canyon.

Sitta carolinensis nelsoni. ROCKY MOUNTAIN NUTHATCH.—Common above 6,500 feet. Its thin, weak voice is quite different from that of the White-breasted Nuthatch of the eastern States.

Baeolophus atricristatus atricristatus. BLACK-CRESTED TITMOUSE.—Very common throughout the forest. As late as the middle of July they were still going about in little family parties, the young constantly begging for food.

Psaltriparus melanotis lloydi. LLOYD'S BUSH-TIT.—Both this species and *plumbeus* occurred regularly throughout the forest.

Museum of Zoology,
University of Michigan.

LABRADOR RECORDS OF EUROPEAN BIRDS.

BY O. L. AUSTIN, JR.

WHEN Mr. H. F. Witherby published his "A Transatlantic Flight of Lapwings" (British Birds, Vol. XXII, No. 1, June, 1928, pp. 6–13; reprinted in Bird Lore, Vol. XXX, No. 4, 1928, p. 248) all the data on that remarkable flight had not yet come to light. This is especially true of the occurrence of the birds in Newfoundland Labrador. He mentions in his paper solely a radio message from Commander MacMillan stating that the Lapwings were seen near Nain on December 22nd. On my trip along the coast this past summer, I procured from the natives several skins of European species, Lapwings and three others, together with a few facts concerning their arrival and sojourn on the coast. Through the courtesy of Dr. Hellmayr of the Field Museum of Chicago, I am able to incorporate the complete data of the European birds collected by the Rawson-MacMillan Expedition with my own notes.

I reached Battle Harbor early in June. The natives told me several Lapwings had been seen there, and though a few had been killed, no specimens had been saved. Nobody knew the exact date of their arrival, except that it was during a spell of exceedingly mild weather during the week before Christmas. The same story was echoed all along the coast, and I saw no proof of the occurrence of the birds until I reached Gready. Robert Stevenson, the wireless operator there, had saved for me a live female Lapwing which was one of a pair that had been wing-tipped by a hungry native when the birds arrived in December and kept alive in his hut all winter. The male perished from cold and neglect, but the female managed to pull through—probably because it was not as badly wounded as its mate. Stevenson bought it from the native at Easter time, and kept it alive on a diet of oatmeal, mussels and chopped seal and whale meat. We took the bird aboard the "Ariel" August 23 and tried to bring it home alive in a crude cage on deck. It seemed healthy, spirited and contented in its new surroundings, eating all the mussels

we could open and all the whale meat we could chop up for it. But, for no apparent reason, it died suddenly two weeks later during a rainy, stormy night off the west coast of Newfoundland. I saved the rather bedraggled skin, and performed an autopsy which showed nothing but the atrophied wing-tip, extreme emaciation and a trace of biliousness.

Stevenson told me the Lapwings were numerous in Sandwich Bay and Hamilton Inlet, between Gready and Northwest River. They occurred in flocks numbering from ten to fifty individuals apiece. He could give no accurate dates, but reiterated the statement concerning the mildness of the weather when the birds arrived.

Dying of either starvation or cold must have been the fate of all the birds that reached Labrador and were not shot. My only other Lapwing specimen is one that an Eskimo woman at Makkovik found dead in April, after the snow had partially melted and exposed the carcass. Such was its state of preservation in this excellent natural cold-storage, that she was able to make a very fair flat skin of it. Every native I interviewed who had killed any of the birds complained that they were much too poor and thin to eat, which is quite an admission from either a Live-yere or an Eskimo.

The two skins of Lapwings brought back by the Rawson-MacMillan Expedition were taken near Hopedale (not Nain). One of these, a male, was shot December 24, 1927; the other, not sexed, late in December, 1927. Both skins have traces of immaturity, which neither of my skins shows. These two Hopedale records comprise the northernmost known occurrence of the species during the flight.

Stevenson, at Gready, saved me the skin of a European Coot, *Fulica atra atra* Linn., which was taken at Separation Point, Sandwich Bay, during the week preceeding Christmas, 1927. The bird was not sexed. I have compared it with the excellent series in the Museum of Comparative Zoology, and find its identity beyond question. Mr. Zimmer of the Field Museum found a female taken by the Rawson-MacMillan Expedition at Tangnaivik Island, Anatalak Bay, late in December, to be identical with the series of the European species in that Museum. These two

specimens are the first definite records of the European Coot in continental North America, the A. O. U. 'Check List' giving solely "casual in Greenland."

There are two records of the occurrence in Labrador of the American Coot, *Fulica americana* Gmelin, the only ones to my knowledge for the species on our Atlantic coast north of the south shore of the Gulf of St. Lawrence. One of these is recorded from Nain by Turner in 1880, the other from Sandwich Bay by Dr. Grenfell in 1899 (Townsend and Allen, "Birds of Labrador," Proc. Bost. Soc. Nat. Hist., No. 7, 1906, pp. 345–346). It is unfortunate that neither specimen is preserved. The European Coot differs from the American only in lacking the white markings on the edge of the wing and under tail-coverts, differences which, not knowing the existence of these characters or suspecting the occurrence of the European bird, only a person of extremely acute perception would notice or remember. Turner did not personally see the bird he records—it was described to him by a native so accurately that he was able to identify it "beyond possibility of doubt." No one with sufficient knowledge to differentiate between the two species saw the specimen of which Dr. Grenfell tells. Hence I believe it more likely that both birds were of the European rather than the American species.

Of more importance are two shore-bird skins I bought from another Eskimo woman at Makkovik. She brought them to me, wanting to know what they were, as neither she nor any one else there had ever seen birds like them. On comparing the two skins with specimens in the Museum of Comparative Zoology, I find one to be a European Common Snipe, *Capella gallinago gallinago* (Linn), and the other a European Jack Snipe, *Limnocryptes minimus* (Brünn). Of course, neither bird is sexed. They are both open, flat skins, and exceedingly good ones for native products. The Eskimo woman killed them December 24, 1927, near her winter house in Jack Lane's Bay. They were undoubtedly driven over by the same storm that brought us the Lapwings.

I was surprised that the Eskimo regarded the Common Snipe as a strange bird. It differs from our Wilson's Snipe only in the width of the black and white bands of the axillaries (my specimen

shows the white bands distinctly wider than the black), and earlier in the same day on which I bought the skins, I flushed four and collected one Wilson's Snipe in a swamp within a hundred yards of her hut. They nest commonly at Makkovik and are not an uncommon bird in the interior and on the coast as far north as Jim Webb's Bay. However, these Labrador breeders must be well on their way south by December.

The 'Check-List' gives *Capella gallinago gallinago* as casual in Greenland and accidental in Bermuda, so that this is its first continental record. The only previous record for *Limnocryptes minimus* within the precincts of the North American list is one taken the spring of 1919, probably April, on St. Paul's Island in the Pribilof Group (Condor, XXII, September, 1920, p. 173.)

Harvard University,
Cambridge, Mass.

THE FLIGHTLESS CORMORANT IN CAPTIVITY.

BY CHAS. HASKINS TOWNSEND.

(*Plate XI.*)

THE existence of this peculiar and large-sized bird remained unknown until twenty-one years ago. Although it has been taken several times since its discovery, it was completely overlooked by all the earlier expeditions to the Galapagos. It is the only Cormorant known to the archipelago and has been found only on Narborough and the adjacent parts of Albemarle Island.

Looking, at least in the water, like other Cormorants, the collectors of the earlier expeditions may have regarded it as one of the common mainland species and thereby missed a prize. That it escaped ornithologists so long is singular, as one of its few known nesting localities is in Togus Cove, an anchorage visited by all Galapagos collectors.

It is probable that this Cormorant was formerly distributed throughout the group, but being unable to fly has been destroyed by wild dogs which have long been very numerous. Its habit of nesting on the islands instead of on off-shore rocks as do most sea birds, may cause its extermination by dogs. These pests have not been reported on Narborough but abound on Albemarle. Nesting groups of Cormorants are few and seldom contain more than half a dozen pairs and the birds are not sufficiently wary to seek refuge in the water when disturbed.

This Cormorant and the marine iguana which shares its habitat, are outstanding examples among the peculiar animal forms indigenous on the Galapagos.

The first living examples to reach this or any other country were those brought to New York by the Zoological Society's expedition of 1923. One of these did not survive long, possibly for lack of sea water to drink, as the first action of the survivor when sent to the Aquarium was to drink sea water. This bird was quarrelsome in the extreme and would soon have killed a Galapagos Penguin brought by the same expedition had it not been removed to another pool. After a few months it fell a victim to draughts

during alterations in the building. Three flightless Cormorants were received at the Aquarium in March, 1928, the gift of Mr. W. K. Vanderbilt who captured them on Albemarle Island.

After prolonged swimming in their pool, the birds stand upright in Cormorant fashion and spread their abbreviated wings to dry much as a Buzzard does on a sunny morning. The wings look as useless as they really are, the feathers being thin and scarcely touching each other. When the bird swims or chases minnows under water the wings are closed against the body. While Cormorant and Penguin were living together it was interesting to see them moving under water with equal celerity, one depending entirely on its widely-webbed feet, the other entirely on its paddle-like wings. In watching the performance there was an added interest in recalling that the sole habitat of both was the same group of equatorial islands. The Cormorant has no counterpart elsewhere and the Penguin is the sole representative of its family in the tropics.

After feeding the birds seek their perches where they often sleep standing on one foot with the head laid diagonally across the back and the beak tucked under the wing feathers—not underneath the wing itself. In this position the eyes are not always covered by the feathers. One of the birds liberated in the office, soon hopped upon a box and thence to the window sill where it remained for hours, enjoying the sunshine, preening its feathers or sleeping. Later while the Cormorant was moving about the floor it suddenly found itself before a large mirror leaning against a radiator. Finding itself closely confronted with its image it jumped back with a loud squawk of surprise. This action was followed by a long inspection of the mirror, the bird raising its head high and gazing intently. When the mirror was shifted a little to one side the Cormorant began looking about among some boxes apparently disconcerted by the disappearance of the bird it had seen. When it came again in line with the mirror and equally close, it shuffled back and squawked again. Here it remained stretching its neck, raising and lowering its head, but did not approach closer. It finally went to sleep without leaving the spot. The bird did not hesitate to jump from the height of an ordinary table and made a good landing on the floor.

N. Y. Zool. Soc.

FLIGHTLESS CORMORANTS,
NANOPTERUM HARRISI ROTHSCHILD, IN THE NEW YORK AQUARIUM.

UNIV. OF MICH.

It then walked to a live tortoise which it inspected and carefully touched with its beak. Later, hearing a few low croaking sounds, the bird was found to be standing opposite the glass door of a book-case intently regarding its dimly reflected image. The Flightless Cormorant is a fighter, uses its sharply-hooked beak effectively and must be handled with gloves. When picked up it always squawks loudly. The weight of one of these birds on September 18, when apparently in good health, was five and a half pounds.

New York Aquarium.

LIMICOLAE OF THE STATE OF OREGON.

BY STANLEY G. JEWETT.

THE following notes are the result of the writer's experience in this state during the past twenty-five years together with a few references to the published records and several references to observations by Mr. I. N. Gabrielson.

It is fully realized that much more time should be spent both on the more important breeding areas as well as along the coast during the principal periods of migration before anything like a complete knowledge of this class of birds is well known.

Owing to drainage as well as the breaking up of much former nesting grounds by agriculturists, some of our large species, notably the Long-billed Curlew, no longer exist in anything like their former abundance. With the exception of the Wilson Snipe, few shore birds are shot for food by sportsmen in Oregon, the only possible exceptions being by some foreigners who persist in shooting anything and everything that has feathers. However, this practice is dying out as a result of efficient game warden service backed by educational work by the Biological Survey and Audubon Societies.

Phalaropus fulicarius. RED PHALAROPE.—This is an erratic migrant during both fall and spring on the Oregon coast. First noted by the writer on September 1, 1912, when a badly emaciated individual was picked up dead on the beach near the entrance to Netarts Bay. Between September 17 and 29, 1920, there was a great migration of these birds on the Tillamook coast. They did not flock in any considerable numbers but occurred singly and in twos to fours all along a stretch of beach for several miles. A number of specimens taken were all much emaciated. Young birds of the year predominated but a few adult individuals molting from the summer to winter plumage were taken. My earliest fall date is September 1, 1912 and the only spring record available is of two specimens taken on the coast of Lane County on March 27, 1916 by Overton Dowell, Jr.

Lobipes lobatus. NORTHERN PHALAROPE.—The most common and regular of the migrant Phalaropes in the state, occurring commonly along the coast and in no wise unusual in the interior. The vanguard of the southward migrants arrive during August and are usually common throughout September. The northward movement is in full swing during late

April and early May. Occurring regularly in the interior during May, once at Redmond, Deschutes County, on June 12, 1924 (Gabrielson—Condor, 26, p. 231), at Narrows, Harney County, July 2, 1925 (sp. No. 3878, Coll. S. G. J.). Other interior records from the writer's notes are: Gold Hill, Jackson County, May 17, 1922; Klamath Lake, September 19, 1923; Malheur Lake, July 30, 1923, and Strawberry Lake, Grant County, altitude 6600 feet, July 15, 1915. One midsummer record on the coast is: Bay Ocean, Tillamook County, July 6, 1914.

Steganopus tricolor. WILSON'S PHALAROPE.—Our only breeding Phalarope in Oregon. Common in the summer in the interior valleys east of the Cascade Mts. Breeds regularly in the wet meadows about all the larger alkaline lakes and sloughs, less common in the northeastern part of the state, but noted in the Wallowa Valley, July 27, 1921, when four were seen. Found most commonly from the first week in May to at least September 22, 1913, at the Alvord Ranch, Harney County. Nests with fresh eggs have been found at the Springer ranch, Harney County, during the first week of June and downy young just hatched were noted at the Shook ranch. Klamath County, on June 1, 1916.

Recurvirostra americana. AMERICAN AVOCET.—An abundant summer resident east of the Cascade Mts., especially about the shores of alkaline lakes. Arrives late in April and becomes well established in colonies on the breeding grounds by mid-May. On May 22, 1922, the writer visited a nesting colony of these birds on a small island in an irrigation sump in Klamath Valley. Some fifteen deserted nests with three or four eggs each were found close to the waterline, while about an equal number of occupied nests with four eggs each were found some twelve feet above the waterline. During a former rise of water caused by irrigationists, the original nesting effort of these birds was destroyed, so they simply moved above the water and successfully raised their young. When slowly-rising water endangers the nest and eggs of this species, they often build up a platform of grass stems under the eggs, sometimes raising them as much as eight inches above the ground. Nests of this character were seen at Springer's ranch, Harney County, during a rise of water during May, 1920. Some birds stay late in the fall until freezing weather drives them south. A few were noted at Jack Lake, Lake County, on October 3, 1913. The only coastwise record available is one taken by M. E. Peck on the ocean beach at Netarts, Tillamook County, on September 10, 1912.

Himantopus mexicanus. BLACK-NECKED STILT.—A regular summer resident at some of the alkaline lakes east of the Cascade Mts., especially in Klamath, Lake and Harney counties. Nests in colonies in limited numbers, eggs having been found near Klamath Falls May 22, 1922 and in Harney County, May 19, 1924.

Capella gallinago delicata. WILSON'S SNIPE.—Very common and to some extent a permanent resident throughout the State, nesting in all suitable localities east of the Cascade Mts. Nests with eggs have been

found along the shores of Upper Klamath Lake on May 28, 1916, and at the Shook ranch in Klamath County on May 17, 1917. The familiar mating call of this Snipe can be heard during the warm May and early June evenings about nearly every swamp in eastern Oregon. During late August or early September, they congregate on suitable feeding grounds where great numbers can sometimes be found. It is a common occurrence to flush one of these hardy birds from some creek bank or a warm spring far back in the mountains even in sub-zero weather during midwinter when snows are deep and most birds have moved to lower levels.

Limnodromus griseus scolopaceus. LONG-BILLED DOWITCHER.—A regular migrant both fall and spring coastwise and in the interior. On May 2, 1916, a number were seen on the ocean beach at Netarts, Tillamook County, and I. N. Gabrielson encountered a flock at Newport, Lincoln County, on May 3, 1922. The stomachs of the specimens taken by R. C. Steele on the tide flats about the south end of Tillamook Bay on April 30, 1923, were examined by the Biological Survey whose report is as follows: No. 166911, U. S. B. S. "Stomach half full. Animal matter 100%. Contents: Fragment of a small *Dytiscid* (probably *Coelambus* sp.), trace; 1 *Corinid*, 2%; *Isopods* (*Aselloidea*, 4 entire and remains of others), 98%; jaws of two small *Nereis* a trace. No. 166910 U. S. B. S.; stomach nearly empty. Contents: Too finely ground for accurate estimate of percentages. Items present are, 1 lead shot, a piece of gravel, jaws of four small *Nereis* sp.? fragments of Isopods, and a few bits of vegetable debris. No. 166911. Stomach half full. Animal matter 100%. Contents: Fragment of a small *Dystiscid* (probably *Coelambus* sp.), trace; 1 *Corixid* 2%; Isopods (*Aselloidea*), 4 entire and remains of others) 98%; jaws of two small *Nereis* sp., trace."

The writer saw a lone Dowitcher at Barton Lake, Harney County, on May 15, 1923, and encountered an immense flock on the shores of Malheur Lake on August 4, 1917.

Calidris canutus rufus. AMERICAN KNOT.—Evidently, of infrequent occurrence on the Oregon coast. B. J. Bretherton in Woodcock's "Birds of Oregon," 1902, p. 20, reports them as rare migrants at Yaquina Bay. My only definite record is of two specimens, one adult and one immature, both males, taken by M. E. Peck at Seal Rocks on the Lincoln County beach on August 19, 1914.

Arquatella maritima couesi. ALEUTIAN SANDPIPER.—First reported from the coast of Oregon (Jewett—Condor 16, p. 93) when specimens were collected from a rocky headland near Netarts Bay on December 31, 1912. On March 18, 1913, the species was again taken from the same rocks. The following year, April 13, 1914, two more were secured in the same location. The species was not noted again until December 31, 1926, when two more were found in company with a flock of Surf Birds.

Pisobia maculata. PECTORAL SANDPIPER.—A regular but not common fall migrant. Not noted in spring migration. On October 3, 1908, a

number were seen about a small lake on Government Island in the Columbia River near Portland. During September, 1923, they were very common in small flocks in Klamath County where they chose the wet or swampy fields as feeding grounds. I. N. Gabrielson reports them at Burns, Harney County, May 24, 1920.

Pisobia bairdi. BAIRD'S SANDPIPER.—A regular and fairly common coastwise migrant, the first individuals appearing on the Oregon coast late in July and becoming common by mid-August. On July 30, 1924, two were seen on the Lincoln County coast and by August 1 had increased to a fair-sized flock. The writer has not seen them on the beach later than September 29, 1920, and has never seen them during the spring migration.

Pisobia minutilla. LEAST SANDPIPER.—Common migrant spring and fall, both coastwise and in the interior. The first arrivals from the north appear in July, a number being seen and two collected by W. E. Sherwood at Salem on July 11, 1924. On July 18, 1914, a lone bird was collected at a small lake on the summit of the Cascade Mts. in Lane County. By the middle of August, they are common along the coast and a few remain to at least November 20 along the coast of southern Oregon. In spring, they are not uncommon around the alkaline lakes of southeastern Oregon. Two were seen at Barton Lake, Harney County, on May 15, 1923.

Pelidna alpina sakhalina. RED-BACK SANDPIPER.—One of our most abundant spring and fall migrants and a few at least remain on the coast all winter. On February 1, 1915, the writer saw a small flock on the Netarts sandspit and collected two specimens, in full winter plumage. The spring flocks bedecked in full summer plumage make their appearance early in May and continue in abundance up to about the 20th. On August 10, 1925, they began coming south in small flocks and by the 15th were on the Tillamook coast in large numbers. Willett (Condor, 21, p. 202) saw several at Malheur Lake, Harney County, and Walker (Condor, 19, p. 134) noted them at Silver Lake, Lake County.

Ereunetes mauri. WESTERN SANDPIPER.—This is the most abundant migrant of all our shore birds, occurring both coastwise and in the interior with great regularity annually. Flocks often numbering hundreds frequent the beaches in May and September. The first stragglers from the north usually occur in July, gradually increasing in numbers until the peak of the migration is reached, usually about the first week in September. A few were seen about a small pond east of Portland on July 3, 1923, and numbers were on the beach of Curry County on November 20, 1917.

Crocethia alba. SANDERLING.—A regular but not abundant spring and fall migrant, mainly coastwise. A few at least remain on the beaches through the winter. The earliest southward migrant noted by the writer was on the Tillamook coast on August 16, 1914, becoming more common thru September. They were noted in numbers at Netarts on November 27, 1914 and again in the same locality on December 29, 1926. A flock

of about twenty-five were seen on January 29, 1915, and again on February 26, 1916. A few have been noted through March and April and the last date is May 16, 1913, when a fine female in summer plumage was taken.

Limosa fedoa. MARBLED GODWIT.—This must be considered a rare and unusual visitor on our Oregon coast. In Woodcock's "Birds of Oregon," 1902, p. 21, it is reported as occurring on our coast by A. W. Anthony but no mention of specimens or dates of occurrence are given. The one positive record available at this time is given by Gabrielson (Condor, 25, p. 109) of a specimen taken at Netarts, Tillamook County, on September 12, 1922.

Totanus melanoleucus. GREATER YELLOW-LEGS.—This fine bird is a common migrant arriving from the north during July and staying with us until late in the fall. It has been noted by the writer in Deschutes County, July 26, 1914; in Wallowa County July 21, 1926 and August to October citations are common. Seen once on November 9, 1912, at Klamath Lakes and the one winter record is of a specimen taken by the writer on December 14, 1926, at Ontario, Malheur County. Spring records of occurrence are from April 14, 1925, in Harney County, to May 12, 1918, in Lake County. Taken on the ocean beach of Tillamook County once in September by M. E. Peck and by Gabrielson at Yaquina Bay on July 20, 1922.

Totanus flavipes. LESSER YELLOW-LEGS.—A not common migrant in Oregon. Woodcock in "Birds of Oregon," 1902, p. 20, records taking a specimen on a gravel bar in the Willamette River on July 10, 1899. Evidence that it visits Malheur Lake is presented by Willett (Condor, 21, p. 202) who records it there on August 18 and 24, 1917; Hoffmann (Condor, 28, p. 48) saw three birds at Netarts Bay, Tillamook County, on September 10, 1925, and took a specimen. The writer's notes mention it seen at Keno, Klamath County, on September 21, 1925, and again along the Grande Ronde River in Union County on July 21, 1926.

Tringa solitaria cinnamomea. WESTERN SOLITARY SANDPIPER.—A tolerably common migrant, mainly east of the Cascade Mts. Specimens have been taken on the Klamath Indian Reservation August 20, 1924, and at Lehman Springs, Umatilla County, August 24, 1919. The earliest fall sight record in the writer's notes is of one seen near Mt. Vernon, Grant County, August 13, 1924. It was seen during spring migration on East Eagle Creek, Baker County, on April 16, 1906, and again on Fall River. Deschutes County, on April 29, 1924. As the name implies, this species is found singly and from choice frequents the smaller mountain streams rather than the open, alkaline lake shores, although Willett (Condor 21, p. 202) records it at Malheur Lake on May 10, and August 24, 1917.

Catoptrophorus semipalmatus inornatus. WESTERN WILLET.—This is one of our common breeding shorebirds about the alkaline lakes of eastern Oregon. They are found commonly in suitable localities in Klamath, Lake and Harney counties, less so in Malheur County. The Willet often utilizes fence posts as perches and it is a common sight to

see several in such positions along the fences across some of the wet alkaline flats. It has been noted along Snake River in Malheur County on May 15, 1925, and west to Klamath Valley on June 13, 1926.

Heteroscelus incanus. WANDERING TATTLER.—A common coastwise migrant frequenting rocky stretches of mussel-covered, rocky headlands. Fairly common from early August (Barview, Tillamook County, August 4, 1923) to late November (Port Orford, Curry County, November 2, 1926). During August, 1925, these birds were very common on the Tillamook coast. Many of those seen were in fine summer plumage and those collected were exceedingly fat. During the spring migration, they have been noted on the rocks at Cape Mears, Tillamook County, on May 1, 1916, and as late as May 20, 1913, at Short Beach in the same county.

Bartramia longicauda. UPLAND PLOVER.—This Plover has not been recorded in the state since the late J. C. Merrill (Auk 5, p. 145) reported a male collected on June 4, 1887, and others seen near Fort Klamath. On March 11, 1928, I wrote Dr. Chas. W. Richmond at the U. S. National Museum regarding this record and his reply is as follows: "In reply will say that we have no specimen of *Bartramia* collected at or near Fort Klamath. At that time, Dr. Merrill was sending his bird skins to Mr. Brewster, whose collection is now in the Museum of Comparative Zoology, Cambridge, Mass., and if you will write Mr. Outram Bangs at that museum I think you will get the definite records you want. In 'The Auk,' for April, 1888, there is a paper on the birds of Fort Klamath by Merrill, who says of *Bartramia* (p. 145): 'A pair seen near the marsh, and the male shot, June 4. A pair with three nearly grown young were seen in the same locality on July 18, and Captain Bendire informs me that he also observed this species at Fort Klamath. The recognized range of the Bartramian Sandpiper is considerably extended by these records.' A footnote on p. 139 says: 'The collection—some two hundred and fifty skins—which I made at Fort Klamath is now in the possession of Mr. William Brewster, whose comments on technical points of especial interest are included in the present paper.' An earlier paper on the birds of Fort Klamath by Dr. Mearns (Bull. Nuttall Orn. Club, 1879, pp. 161–166, 194–199) does not mention the *Bartramia.*"

On inquiry to Mr. Outram Bangs, his statement is as follows: "About *Bartramia longicauda*, I can tell you only that the late J. C. Merrill did *not* send Mr. Brewster any skins of that species from Fort Klamath, or in fact from anywhere. Of course, Merrill sent a lot of his birds elsewhere, and I think Mr. Brewster had, perhaps, only a few of what he collected. I looked through our series and Mr. Brewster's catalogue and all his skins and we have no Upland Plover from Oregon."

In view of the fact that the bird life of the Klamath Basin has been studied carefully of recent years and no *Bartramia* records found, this species should be placed on the hypothetical list in the future.

Actitis macularia. SPOTTED SANDPIPER.—This is the most commonly distributed Sandpiper in the state and to some extent is a permanent

resident. It nests from near sea level on the rocky bars of all the coastal streams to the alpine meadows of the Cascade and Blue Mts. in the Hudsonian zone; after the breeding season, it wanders to the lakes at and near timber line, as well as to the ocean beaches. Nests with eggs have been found along Powder River in Baker County on June 19, 1906, and at 5,000 feet altitude in the Blue Mts. of Umatilla County on July 18, 1923. Young birds have been collected by W. E. Sherwood near Salem that were just changing from the natal down into first fall plumage on July 11, 1924. Migrant birds appear singly along the ocean beach during late August and were common along the Rogue River in Curry County on November 29, 1916.

Numenius americanus. LONG-BILLED CURLEW.—Formerly an abundant summer resident, mainly east of the Cascade Mts. but now restricted to a few localities only. Thirty years ago, they were reported as a common summer resident in the Grande Ronde Valley but now nearly or entirely absent there. A considerable number summer in Lake, Harney and Umatilla counties at the present time. Nests with eggs have been found in Harney Valley on May 19, 1925 and June 4, 1926. On August 22, 1926, Dr. A. G. Prill collected two of these birds near Scio, Linn County, and Gabrielson reports an adult male taken at Yachats, Lincoln County, on July 24, 1922. The long-billed Curlew arrives from the south early in April, nests in May and June, after which they congregate in small flocks to spend the summer in the wide-open valleys of eastern Oregon.

Phaeopus hudsonicus. HUDSONIAN CURLEW.—Occurs on the salt-water bay shores and ocean beaches only as a migrant. Found more or less common on the Tillamook coast May 1, 1921 and May 17, 1913, and again in the fall on September 6, 1913, and during October. A flock was reported by I. N. Gabrielson on July 24, 1922 at Yachats, Lincoln County.

Squatarola squatarola cynosurae. BLACK-BELLIED PLOVER.—So far as our observations go, this must be considered as only an occasional transient on the Oregon Coast. Gabrielson (Condor 25, p. 109) reports meeting the species and collecting a specimen near Newport, Lincoln County, on January 21, 1923. Mr. M. E. Peck took a beautiful male in summer plumage at Seal Rocks, Lincoln County, on August 20, 1914, and the writer saw a flock of nine on the Tillamook coast on May 1, 1921.

Pluvialis dominica dominica. AMERICAN GOLDEN PLOVER.—An irregular and rare visiting transient. The writer recorded one taken (Condor 16, p. 114) at Netarts Bay, Tillamook County on September 12, 1912. It was alone at the time. No other occurrence of these birds was noted until September 12, 1926, when two were encountered on the Curry County coast.

Oxyechus vociferus vociferus. NORTHERN KILLDEER.—This is the most abundant and well distributed of all our shorebirds. Equally common both east and west of the Cascade Mts. where a few remain all winter despite cold and snow. It winters commonly in western Oregon,

both coastwise and in the interior. Nests with eggs have been noted between April 15 and June 10. Downy young have been noted in Jackson County as early as April 22, 1922. During late summer, Killdeer often wander into the Cascade and Blue Mts. to an altitude of at least 6,000 feet.

Charadrius semipalmatus. SEMIPALMATED PLOVER.—A fairly common coastwise migrant, both fall and spring. Noted on the Tillamook coast on May 1, 1916, and found common by May 20. During the fall migration, they begin coming in by August 9 and are common through September. One was noted on the Curry County coast on July 25, 1927. They frequent both the muddy tide flats and the ocean beach.

Charadrius nivosus nivosus. WESTERN SNOWY PLOVER.—A fairly common resident in suitable localities along the coast and a summer resident at Harney Lake in the interior, frequenting by choice the open, wind-swept sand dunes. On May 16, 1923, a pair was noted on the wide, open alkaline flats at Harney Lake. Noting their actions, a search was made and the characteristic scooped-out nesting hollow was soon discovered. No eggs had been laid but both birds stayed close about and showed every evidence of nesting birds. Mr. E. S. Currier has taken full sets of eggs on the Tillamook County coast on July 13–14, 1921. Noted on the ocean beaches commonly in December, 1912, and January, 1913.

Aphriza virgata. SURF BIRD.—If one has the hardihood and necessary enthusiasm to visit the rocky, windswept headlands on the Oregon coast on some stormy midwinter day, he is fairly apt to be rewarded with a sight of these plump arctic visitors feeding calmly among the mussels and barnacles amid howling winds and salty spray. My earliest fall records were made on September 11, 1926, when, after a heavy inshore wind, a number of these birds were found feeding with a flock of Black Turnstones on the Curry County coast. November to February records appear regularly among my notes and one lone bird was collected on the Tillamook coast on April 15, 1914, and Gabrielson took two males out of a flock on April 27, 1922, at Cannon Beach. The earliest fall record available is of two specimens taken by Mr. M. E. Peck on the Lincoln County coast on August 17, 1914.

Arenaria interpres morinella. RUDDY TURNSTONE.—A rare and irregular transient in Oregon. My only records are for an adult female taken by M. E. Peck on the Lincoln County coast on August 28, 1914, and a flock encountered on the Tillamook coast by I. N. Gabrielson and the writer on August 26, 1921. Several immature specimens were taken at that time. Woodcock "Birds of Oregon," 1902, mentions *interpres* as a "migrant." No specimens of this race are extant from Oregon and until taken should be eliminated from the state list.

Arenaria melanocephala. BLACK TURNSTONE.—This is a common and regular winter resident, frequenting by choice the rocky coast line where they are at home just above the breakers on the mussel-covered

rocks. Flocks are commonly seen from September 14 to late in April, and occasionally in early May. At Short Beach on the Tillamook coast, a fair-sized flock was seen on May 2, 1916. The only inland record known (Condor 26, p. 35) and reported by the writer was of a bird killed by George Russell at Wapato Lake, Washington County, on November 13, 1913.

Haematopus bachmani. BLACK OYSTERCATCHER.—A permanent resident on rocky headlands and offshore rocks and islets. Nesting regularly on Three Arch Rocks bird reservation. On July 2, 1914, one pair occupied the outer rock, where the nest containing one egg was found on a bare shelf of rock above high tide. Flocks are frequently seen on the rocks near Cape Mears in Tillamook County and they were fairly common on the Curry County coast on September 11, 1926. Mr. I. N. Gabrielson noted nearly full-grown young, accompanied by their parents on the coast of Lincoln County on July 4, 1926. Woodcock "Birds of Oregon," 1902, mentions *palliatus* at Yaquina Bay, Lincoln County. No specimens are reported and in the writer's opinion this species is not entitled to a place on the Oregon list.

Portland, Oregon.

GENERAL NOTES.

The Summer Molt of the Razor-billed Auk (Alca torda).—On August 14, 1928, near the Matamek River, just east of Moisie, on the north shore of the Gulf of St. Lawrence, while collecting for this museum, we took eight specimens of this species. Of these, two were still in complete nuptial plumage with full seal-brown head and neck and large bill crossed by a conspicuous white line. One was a half grown juvenile in semi-down and the remainder were adults molting from nuptial into winter plumage. These latter had already lost their deciduous bill-sheaths with their strong white lines and the bills were reduced to the normal winter condition. The brown of the throat was heavily sprinkled with incoming white feathers. All of these changing birds were absolutely flightless through simultaneous loss of their flight quills. It can hardly be supposed that all five of these birds were undergoing abnormal molt and it seems evident that the species undergoes a flightless season in the midsummer molt as do many of the Ducks. I have not seen this fact mentioned before and it appears to be new to ornithology.[1] A Common Murre, *Uria troille* taken near Betchewan, July 18, also an adult, in molt and flightless, suggests that the same may be true of that species.

Puffins, Murres and Auks on this coast all desert the breeding stations as soon as the young are launched upon the water. This happens very early in the development of the latter, long before they attain full size and while they are still in the half down. They usually leave the nest ledges at night and by morning have disappeared from the locality. It is very unusual to see swimming juveniles, or adults that have finished their reproductive duties, in the neighborhood where thousands have been raised or so engaged. The conclusion is that young and old immediately go to sea and scatter widely, the young to develop to adolescence, the adult to assume winter plumage. On the broad wastes of the open sea, rarely traversed except by hurrying ships, it is not astonishing that molting Auks have hitherto been overlooked by collectors and this flightless stage passed unnoticed. That the occasional bird accidentally met with at sea in midsummer cannot fly would not generally be noticed for they often seek to escape danger by diving instead of flying and the persistence of the act at sea would attract no particular attention.

The small juvenile bird taken is also in an interesting plumage resembling the nuptial one in color and pattern even to the white line from the base of the culmen towards the eye, but the texture of the feathers is soft and downy as quoted from Macgillivray by Bent in his first volume of

[1] This manner of molting was described in *Uria lomvia* and *Cepphus mandti* by Stone in 1900 (Proc. Acad. Nat. Sci. Phila., 1900, pp. 6–7) and according to Stresemann (Aves. Handb. der Zool., 1927, p. 34) it is characteric of the Grebes, Rails, Cranes, Auks, Flamingo and Anhinga.—Ed.

'Life-Histories.' There is therefore a distinct soft, semi-downy plumage resembling that of the summer adult between the nesting down and the plumage of the first winter. A similar sequence of plumages is found in the Dovekie (*Alle alle*) but not in the Common Murre which goes from down into a conventional white-throated plumage similar in color and pattern to that of the first winter.—P. A. TAVERNER, *National Museum of Canada, Ottawa.*

The Wedge-tailed Shearwater off the Coast of Vancouver Island, British Columbia.—During August, 1919, I received a skin of a pale-colored Shearwater from Oliver Trafford, a taxidermist of St. Eugene, Ontario, the inscription "Vancouver, B. C." being the only data on the label.

A short time ago, while Dr. H. C. Oberholser was at my home, he identified the specimen as *Thyellodroma pacifica* and advised me that this species had as yet not been recorded for the coast of the United States or Canada.

It is much regretted that neither the collector's name nor the date of capture is known, but on account of the apparent rarity of this Shearwater on the north Pacific coast this specimen is now put on record.—STANLEY G. JEWETT, *Portland, Oregon.*

The Sooty Tern (Sterna fuscata) at Stone Harbor, N. J.—On January 13, 1929 at Stone Harbor, Cape May County, N. J., the writer with Ernest Evans, Joseph Stokes, and Woodruff Emlen found a dead Sooty Tern on the salt marsh about a quarter of a mile back of the Coast Guard Station near the head of an inlet. Except for the wings, feet, bill and tail the bird was in a very decomposed condition and had evidently been lying there for a long time. The wing measured eleven and an eighth inches and answered the descriptions in several standard text-books as did the other parts that were collected. The bird had probably been blown north by a tropical storm during the autumn of 1928 as there have been several other records of the same species occuring along the Atlantic coast in September 1928.—WILLIAM C. DOAK, *Germantown, Philadelphia.*

A Flight of Ross's Gulls[1].—I recently received from a correspondent of mine at Point Barrow, Alaska, a series of Ross's Rosy Gulls (*Rhodostethia rosea*). He writes to me that late in September, with a strong northwest wind, these rare Gulls came in over the beach in thousands. He never saw them so plentiful before or quite so early in the season. They arrived on September 26, but are generally not seen until late in October or in November. They always come, however, with a northwest wind seeming to arrive from off shore somewhere and working along northward. As soon as the wind changes they leave the coast for the islands off shore, remaining around as long as there is sufficient open water for the boats to get out whaling. For two days they were so numerous

[1]Published by the Dwight Memorial Fund.

on the beach that the Eskimos shot hundreds of them for food. He could have taken all he wanted but collected only what he could personally save as specimens, some of which he sent to me.

He says that the Ivory Gulls were scarce this fall and did not come in to the shore at all. Boats that were out whaling reported seeing many of them as well as the Ross's Gulls.

As the birds in this series, which are in fresh, adult winter plumage, are so much more richly colored than any I have seen, it seems worth while to place on record an accurate description of the colors before they fade. This plumage is illustrated by Murdoch in his report on the natural history of the Point Barrow Expedition (1885) but the pink colors on my birds are much deeper and more extensive than appears on this plate; furthermore the bird in the plate has a white tail whereas my birds all have decidedly pink tails. During my absence Mr. Ludlow Griscom has kindly sent me the following description:

"General color shrimp pink of Ridgway, a warmer shade on the chest, sides, and under surface of tail, palest or dullest on the sides of the head and hind neck; auricular region and area around the anterior half of the eye tipped with blackish, the pileum and sides of the head elsewhere tinged tipped or clouded with pale gray; hind neck and fore part of the mantle pale shrimp pink, the feathers more and more tipped with pale gray, the mantle appearing gray faintly suffused with pink; wings pale neutral gray suffused with pink along the bend of the wing, tertials and scapulars; outer webs of outer secondaries and some of the greater coverts pale shrimp pink; shafts of three outer primaries dull pink above, bright pink on the under surface; entire under surface of the wing strongly suffused with pink; tail shrimp pink, the longer central tail feathers tipped for a short distance with very pale gray."—Arthur Cleveland Bent, *Taunton, Mass.*

The Fall Flight of Geese to Louisiana.—The uniformly early arrival of Geese along the gulf coast of Louisiana has always interested me, but I was never fortunate enough to be in the field when the Blue Geese (*Chen caerulescens*) arrived on their wintering grounds, until the fall of 1928. These birds have a very limited range, the bulk of them making the coastal marshes of Louisiana their winter home. A great flock of thousands of individuals works the salt marshes at the mouth of the Mississippi River, and others are found near Marsh Island and Chenier au Tigre, about midway to the Texas border. As one travels west from Chenier au Tigre, fewer Blue Geese are seen and the Lesser Snow Goose becomes more common. At the mouth of the Mississippi, during the fall of 1928, we found about forty Blue Geese for each Snow Goose (*Chen hyperboreus hyperboreus*), while the ratio was reversed in Cameron Parish in western Louisiana, the first of November.

Through the courtesy of Mr. Joseph Leiter of Chicago, I was able to spend ten days on his estate at the mouth of the Mississippi River. He owns and leases some 15,000 acres of coastal marsh on the north side of

Main Pass, and this land is in the heart of the wintering grounds of the Blue Geese. On my arrival, October 20, I found the Blue Geese had not arrived. We saw a flock of possibly one thousand Canada Geese (*Branta canadensis* sub-species) and White-fronted Geese (*Anser albifrons* sub-species) on this date, and birds of both species were seen during the following ten days.

The first Blue Geese were seen October 25 when we flushed a great flock of possibly two thousand birds, from the marsh. The noise of our boat evidently disturbed them, for they arose from their feeding grounds, and after milling about for fifteen minutes, drifted down the coast to the mouth of Main Pass where they rested in a great sea bend. I believe they arrived during the night.

We entered our photographic blind at nine o'clock, and for the next few hours, witnessed the most interesting migration it has been my fortune to see. The Blue Geese, with an occasional Snow Goose, were coming in, following down the coast. A strong northwest wind had been blowing, which in the early morning changed to northeast, so the Geese had a fair sailing wind, and they came, flock after flock, the white heads of the adults agleam in the sun. We could distinguish the juvenile note from that of the adult, as the hosts sent their quavering calls back to those following. There were from one to three flocks in sight all day, ranging from 25 to 200 individuals, and they all came from the north and passed over practically the same route, as though the flocks were following each other. Had we anticipated such a flight, it would have been easy to count the flocks and estimate the number of birds.

Marsh men, in the employ of Mr. Lutcher Stark in Cameron Parish, western Louisiana, told me that the Snow Geese also arrived from the north on October 25, so the two species arrived on the Gulf Coast at the same time.—Alfred M. Bailey, *Chicago Academy of Sciences.*

Migrating Water Birds on a New Artificial Lake in Piedmont Virginia.—In the summer of 1926 an artificial body of water known as Timberlake, containing forty or more acres, was developed by realtors near Lynchburg, Virginia. The new lake is about forty miles east of the Blue Ridge mountains, and is ten miles southwest of the city of Lynchburg and the James River. The country surrounding the lake is typical Piedmont as regards climate, topography, flora and fauna.

For three seasons we have been watching the migration of Ducks and other water fowl at the lake. During the fall and winter of 1926-27, few migrants visited the lake. A Pied-billed Grebe and a few Lesser Scaup Ducks were the only species observed. We were considerably misled that year into believing that a number of Mallards and four Canada Geese were wintering at the lake. We soon found out that they had been transferred from a park at Roanoke, Virginia, and were thoroughly tamed. These tame birds had much to do with attracting wild species.

During the autumn of 1927, Mrs. Freer and I made many trips to the

lake, observing thirteen wild species. These included Holboell's (?) Grebe, Horned Grebe, Pied-billed Grebe, Cormorant, Mallard, Black Duck, Pintail, Redhead, Lesser Scaup Duck, Golden-eye, Buffle-head, Old-squaw and Ruddy Duck. Of these, the Mallards, Black Ducks, Lesser Scaups, Buffle-heads and Redheads were frequent in their visits and rather abundant in numbers. The Cormorant, Pintail, Golden-eye, and the Grebe identified as Holboell's, were solitary, and stayed only a day or so. The Grebe had the characteristic winter plumage of this species, and was considerably larger than the Horned Grebe. A flock of eight Horned Grebes and a pair of Old-squaws stayed only a short time, during a storm. The largest number of individuals observed at any one time during that fall was 78.

During the fall and winter season just closing I have found twelve species at the lake, including the Horned Grebe, Pied-billed Grebe, American Merganser, Hooded Merganser, Mallard, Black Duck, Green-winged Teal, Redhead, Lesser Scaup Duck, Buffle-head, Ruddy Duck, and Coot. The number of individuals on the lake at any one time has never been as large as a year ago.

The Mallards and Black Ducks which came in the fall, arriving in early November, have remained through the winter. No visiting migrants except these two species were observed during December. On January 26, 1929, a pair of female American Mergansers and a Horned Grebe were seen on the lake.

As time goes on and the natural food of the water birds becomes more abundant, the lake should be a haven for increasing numbers of migrants. So far as I know, nothing has been done in the way of introducing natural plant or animal species as food for wild ducks. No wild species have been observed to remain for breeding.—Ruskin S. Freer, *Lynchburg College, Lynchburg, Va.*

The European Coot in America.—Early in May of 1928 this museum received for identification the dried fragments (head, leg, foot and wing) of a European Coot (*Fulica atra*) from Mr. Gower Rabbitts, Secretary of the Game and Inland Fisheries Board of Newfoundland.

Under date of May 7, Mr. Rabbitts informed me that it was taken in Exploits Harbor some time in the previous December, and that two others had been killed but he had been able to secure only these fragments.

The specimen has been returned to Mr. Rabbitts, who stated that it would be deposited in the Memorial University College, but not until after it had also been submitted to Mr. J. H. Fleming of Toronto and Mr. Outram Bangs of Cambridge for corroboration of my identification.

It looks as if these birds accompanied the extraordinary flight of Lapwings from England, that occurred about the same time and has been reported elsewhere.—P. A. Taverner, *National Museum of Canada, Ottawa.*

Sora Breeding in Mississippi.—In a report dated July 6, 1927, United States Deputy Game Warden Clifton E. Mosley reported the Sora (*Porzana carolina*) breeding in 1926, near Greenwood, Mississippi.

Upon writing to Mr. Mosley regarding this occurrence, he supplied the following verbatim quotations from his notebook: "June 5th, 1926—Ten miles east of Greenwood in Carroll County, Mississippi, I observed a bird of the rail species which proves to be a perfect stranger to me. Under a cluster of low heavy willow bushes on the ground in a low marshy place this bird has a nest constructed of wire grass (or swamp grass) weeds and strips of cattail blades. Color of bird—brownish slate with equally divided stripes of yellow on back, and stripes of same color, pointing downward on sides—yellow blunt bill shaped very much like that of a chicken. Size looks to be about that of a broiler chicken, in fact its movements and looks while on nest remind one very much of a chicken nesting. Very gentle. No count of eggs or sight of same as I did not disturb the bird."

"June 11, 1926.—Returned to the place of the Sora's nest having been convinced that the species is a Sora Rail when referring to Reed's 'North American Birds' and illustrations in bulletins of the U. S. Dept. of Agriculture—I find the female with, I would judge, a dozen young birds, like young quails, just a few yards from the nest."

Mr. Mosley has checked his identification with a Sora that in April 1927, was picked up on the main street of Greenwood (apparently a flood refugee) and concludes that he can "make the positive statement that a Sora hatched 10 miles east of Greenwood, Mississippi."

This is much farther south than any other breeding record for this species that has come to my attention. In U. S. National Museum 'Bulletin 135' (Life Histories of North American Marsh Birds, by A. C. Bent), page 313, the writer outlined the breeding range of this bird as extending south to Pennsylvania, Ohio, Indiana, Illinois, Missouri, etc.—FREDERICK C. LINCOLN, *Biological Survey, Washington, D. C.*

The Red Plumage Coloration of the Little Brown and Sand-Hill Cranes, Grus canadensis and Grus mexicanus.—For some time I have been puzzled by the brick red coloration of these two species. Some birds are strongly red on back, wings, crown and neck, while others are clear dull lead blue with or without traces of red. The color seems perfectly natural in pattern and distribution but after examining a considerable series it does not seem to be correlated with age, season, sex or geography nor are any new or incoming red feathers to be discovered on adult birds while new bluish ones are comparatively common.

Acting on the suggestion given by Mr. F. H. Kennard (Auk, XXXV, 1918, 123-132) I had a selection of feathers from some mature specimens in our collections tested by Mr. R. T. C. Fabry, analyst to the Department of Mines. His report is as follows:

"The feathers were all treated in the same manner, being boiled in a very dilute hydrochloric acid and the resulting solution tested for iron.

"No. 15438 color due to ferric oxide.

"No. 15544 color due to ferric oxide.

"No. 20. There is only a very small trace of ferric oxide here, the test solution answering to the reaction for iron only after prolonged standing. It will be noticed in this case the brown coloration has not been entirely removed by boiling with dilute acid as is the case in the other specimens. I am inclined to believe, therefore, that in the case of specimen No. 20 there may be a reddish organic pigment in the feathers irrespective of coloration due to ferric oxide.

"In each case after treatment with acid the feather was washed and dried and is returned herewith for the purposes of comparison with untreated specimens."

As Mr. Fabry infers, in the specimens where ferric oxide was markedly present the strong reddish color has almost completely disappeared and the feathers have come through the ordeal almost pure lead blue. The single specimen (No. 20) in which this did not occur, was a worn, faded wing covert from well down on the side of the folded wing, and but slightly rufescent. It is evident therefore that most of the rusty color on these birds is adventitious just as it is on Ducks and similar birds that are exposed to iron impregnated waters.

It is interesting that the downy young of these latter species just out of the egg are largely the same shade of red as this iron stain and the same color is present in the first autumn plumage. A feather and some down were therefore extracted from a juvenile Sandhill Crane, well advanced in autumn plumage but with remains of down still adherent (U. S. Nat. Mus. 77502, Cold Springs, Colo., July 16) and tested as above. This bird has the back, and the neck as far as the crown, strongly red. Mr. Fabry reports:

"The said feather was treated with acids and the resulting solution tested for iron in the usual way. There was only a very slight trace of iron shown after prolonged treatment with acid, and I am therefore inclined to believe that at any rate, the bulk of the color in this particular specimen, is of organic origin and not due to extraneous iron stain."

This feather and down show very little change in color under the treatment. It has bleached somewhat but the red remains strong and bright and I am convinced that it is natural and not adventitious.

It thus appears what while the downy young and first year juvenile of these Cranes are naturally heavily washed with dull brick red, the adult is inherently solidly dull slate or lead blue but is often stained with an iron deposit of approximately the same shade and appearance as the red of the juvenile and from which it can certainly be told only by chemical examination.

It is curious that not only are these colors, of unlike origin and composition, alike in appearance, but their distribution upon the bird is strangely similar. They are heaviest on the mantle, extending to the breast and up

the neck to the crown, but generally absent from the abdomen and face. It is rather puzzling to understand how this stain is deposited on the upper instead of the under surfaces that would seem to be most exposed to contact with ground water. In the Ducks and Geese the stain usually gathers on the head, face and under parts of the body while the back remains almost free from it. The explanation of the difference probably lies in the habits of the two groups of birds.—P. A. Taverner, *National Museum of Canada, Ottawa.*

Cranes Crossing Bering Strait.—As a member of the Stoll-McCracken Expedition to the Arctic I had the interesting experience of seeing Little Brown Cranes (*Grus canadensis*), crossing Bering Strait on the southward migration. One flock of about twenty birds was observed on August 27, 1928, a bright day, though with a cold northwest wind, following a storm during which much new snow fell on the Siberian side. Two more flocks of twelve and twenty birds, were seen on August 30; wind south. The intervening days had been stormy and East Cape was again covered with new snow. All of the birds were flying southeast in the direction of the Diomedes and Cape Prince of Wales, crossing the strait at its narrowest portion.

Cranes were also seen at the delta of the Agiapuk river, near Teller, July 21 of the same year, and a flying flock was observed from the vessel at the anchorage, near Teller, on September 10. They were reported numerous near the Bluestone river, by prospectors, about the same time.

An Eskimo from the Little Diomede said that they pass in the direction of East Cape, Siberia, at "the beginning of summer," returning in the fall. They do not stop, according to him, at the Diomedes.

This corresponds with the migration dates as given by Bent (Life Histories of North American Marsh Birds—U. S. National Museum Bulletin 135).—F. L. Jaques, *American Museum of Natural History, New York City.*

The Snowy Egret (Egretta thula thula) at Avalon, N. J.—An unusual bird rewarded an automobile trip to New Jersey coastal points on September 23, 1928. While driving over the salt marshes back of Avalon, Cape May County, a large number of white Herons was observed. There were a few Egrets (*Casmerodius egretta*) and a large number of immature Little Blues (*Florida caerulea caerulea*). Close inspection of a nearby flock of six of the latter showed that one individual was more agile and had a thinner, entirely black, bill. Finally, when it took wing, it showed clearly its black legs and yellow feet in contrast to the dark olive legs and feet of its companions. At the close range afforded it was easily identified as a Snowy Egret, the first, I believe, to be recorded from New Jersey for many years.

Edward S. Weyl and William H. Yoder accompanied the writer and the bird was studied by all of us with binoculars.—Philip A. Livingston, *Narberth, Pa.*

American Egret (Casmerodius egretta) at Williams Lake, York Co., Pennsylvania.—On Aug. 29, 1928, I saw for the fourth summer a lone American Egret at Williams Lake. July 1925 was my first sight of this species there. I also counted on that occasion a group of twenty-three Little Blue Herons (*Florida caerulea*) in the white immature phase.

Williams Lake, situated on the Susquehanna trail, about five miles east of York, is the impounding basin for the York water supply, and the Water Company has acquired several hundred acres of land surrounding this artificial lake, where they have planted over 600,000 coniferous trees, mostly pine. The spillway for the lake has spread over a good area, affording a considerable bog, and the entire place is ideal for birds.

In August, 1926, I spent a day at the keeper's home, and secured a picture of the American Egret, which was feeding in the marsh. I also saw numbers of young Little Blue Herons scattered about the marsh, and a pair of Great Blue Herons (*Ardea herodias*) wading further up stream, and an American Bittern (*Botaurus lentiginosus*) which flew up from among the cat-tails. The keeper then told me there were fewer Little Blue Herons than in the previous year, which he attributed to the fact the Company had put six more Swans on the lake, which antagonized the Herons. He also said there was a variety of water birds on the lake at different times.

In the summer of 1927 when driving on the trail, and crossing the bridge, I saw the American Egret alone, feeding in the bog near the bridge, and apparently oblivious of the passing cars. Further up stream I saw several Little Blue Herons and one great Blue Heron.

Again last summer I saw the American Egret, and two Little Blue Herons, from the road.—Mary D. Dise, *Glen Rock, Penn.*

Northern Phalarope at Madison, Wis.—A Correction.—The date October 14, 1927, given in 'The Auk' (1928) p. 106, for the capture of a Northern Phalarope is an error and should read September 24, 1927.—A. W. Schorger, *2021 Kendall Avenue, Madison, Wisconsin.*

A Lapwing from the Canadian Labrador.—Through the courtesy of Mr. Harrison F. Lewis, Federal Migratory Bird Officer for Quebec, this museum has come into the possession of a flat skin of a Lapwing (*Vanellus vanellus*), taken by Mr. Thomas Kennedy at St. Augustine, Saguenay Co., Quebec, about December 15, 1927. St. Augustine is on the north shore of the Gulf of St. Lawrence, near the Straits of Belle Isle, longitude about 58° 45′ West. This seems to be the first recorded specimen for the Canadian Labrador coast and an addition to the list of arrivals from the great transatlantic flight of 1926-27, reported by Ernest Ingersoll in 'The Auk' 1928, p. 208 and in extenso by H. F. Witherby, 'British Birds,' XXII, 1928, pp. 6-13, republished in 'Bird-Lore,' XXX, 1928, pp. 248-252.—P. A. Taverner, *National Museum of Canada, Ottawa.*

Snowy Plover in Haiti and Porto Rico.—On July 25, 1927, I observed a pair of Snowy Plovers (*Charadrius nivosus tenuirostris*) at the Etang

Bois-Neuf, a small brackish lagoon south of St. Marc, Haiti, and collected the female. The condition of its ovary indicated proximity to the breeding season. On May 5, 1928, I collected a male of the same species on a white sandy salt flat near Cabo Rojo Lighthouse, the extreme southwestern tip of Porto Rico. Its testes were much enlarged. I have not been able to find any published record of the occurence of this species in either Haiti or Porto Rico.—STUART T. DANFORTH, *College of Agriculture, University of Porto Rico, Mayagüez, Porto Rico.*

Woodcock Carrying Young.—There are many references in American literature to the habit of the Woodcock (*Philohela minor*) carrying young between its thighs or tarsi; few to the use of the feet for this purpose. It has required personal observation to overcome my belief that "from the nature of things" the Woodcock would not use its feet for transportation. On the morning of June 1, 1928, I was in the bottom lands of the Wisconsin River at Boscobel. While walking through a strip of large timber growing in sand, bare of all cover except patches of dried leaves, a Woodcock flushed at a distance of a few feet. Clasped between the toes was a young bird about one and one-half inches long. The leaves from which the old bird arose contained numerous small spots of excrement, but no additional young were discovered.

I have taken some pains to review the early literature. It is interesting to know that the use of the feet has been known in Europe for nearly a century and that this habit has always strained belief. Chapter XXVIII of 'Wild Sports and Natural History of the Highlands' by Charles St. John (first edition 1846) contains the following: "I have, however, ascertained that the old bird lifts her young in her feet, and carries them one by one to their feeding-grounds. Considering the apparent improbability of this curious act of the Woodcock, and the unfitness of its feet and claws for carrying or holding any substance whatever, I should be unwilling to relate it on my own unsupported evidence; but it has been lately corroborated by the observations of several intelligent foresters and others, who are in the habit of passing through the woods during March and April."—A. W. SCHORGER, *2021 Kendall Ave., Madison, Wisconsin.*

Woodcock Wintering in Massachusetts.—An old sportsman friend of mine, Mr. Fred Moore, told me today (December 10, 1928) that he had flushed a large Woodcock on the preceding day on his farm at Sereganset, Mass., where there was a spring of water and springy ground. His statement is perfectly reliable as he has shot hundreds of Woodcock.—GEORGE H. MACKAY, *Nantucket, Mass.*

Early Record of the Passenger Pigeon.—In Llewellen Powys' 'Voyages of Henry Hudson' it is stated that on the fourth and last voyage of the "Half Moon" Hudson reached the mouth of the Hudson River early in September 1609 and on September 17, anchored off a point where is now the site of Kingston, N. Y. On the next day an Indian chief came out in a canoe and the Journal continues:

"We went ashore with the savage .... On our coming into the house two mats were spread out, to sit upon, and immediately some food was spread, served in well made redwood bowls. Two men were also dispatched at once with bows and arrows in quest of game, who soon after brought in a pair of pidgeons which they had shot."—W. B. MERSHON, *Saginaw, Mich.*

Some Weights of Mourning Doves in Captivity.—In an article in 'The Auk' of July, 1928, on "A Method to Determine the Weight of Food Digested Daily by Birds" Mr. Wm. B. Taber, Jr., describes his procedure of trapping wild birds late in the afternoon and weighing them then and on the following morning; from the differences in these weights he calculates the 24 hour rate of loss and considers that this "must be equivalent to the daily food consumption," i. e. "dry matter and water." In 1919 in Norman, Oklahoma, I had in captivity two young male Western Mourning Doves (*Zenaidura macroura marginella*); and the results of some feeding tests with these birds may be of interest in connection with Mr. Taber's paper.

The older bird, "F," was given to us September 25, when about two months old; "D," was taken from the nest October 1, at the age of about nine days. They were kept in a large room with open windows and remained in good health, but of course took much less excerise than if they had been at liberty. On test days each bird was weighed before its breakfast and after its last meal at night. A generous amount of the different kinds of food was always supplied.

From November 16 to 25, "F's" morning weights varied from 97.2 to 99.7, averaging 98.4 gr., his evening weights varied between 106.5 and 109.6, averaging 108 gr. Multiplying his nightly loss by two we find that his 24 hour loss varied between 15.3 and 23.7% of his morning weight, averaging 19.2%. From December 28 to January 3 his morning weights varied between 103.8 and 105.7, averaging 104.8 gr., his evening weights varied between 112.7 and 115.4, averaging 114.3 gr. His average 24 hour loss was 17.1% of his morning weight.

From November 17 to 23, "D", varied between 97.5 and 101.5 gr., averaging 99.3 in the morning, and between 105.5 and 108.7, averaging 107 gr., in the evening. His daily loss varied between 12.6 and 19.5% of his morning weight, averaging 16.5%. From December 28 to 31 his morning weights varied between 97.5 and 99 gr. averaging 98.4; his evening weights between 106.5 and 108, averaging 107.3 gr., while the 24 hour loss averaged 18.9%.

It is not clear why such large variations in nightly loss should occur under uniform conditions. The high and low rates of loss appeared to occur at random; they certainly did not coincide with the two birds. The average 24 hour loss of these captives is not far different from that of Mr. Taber's 22 wild Mourning Doves—16.1%; his maximum was 24.1—a little higher than any of mine, while his minimum was decidedly lower than any of mine—7.8%. He states that "the daily food consumption of 13

Mourning Doves trapped from April 2 to August 1 averaged 11.7% of their weights, while the daily food consumption of 9 trapped from September 6 to October 6 averaged 20.4%." With "F" the loss was somewhat less in December than November, with "D" the opposite was true.

As to the food eaten, six days' consumption by one bird of a mixed diet (59.9 gr. of seeds and grain, 27.6 gr. of bread and milk) amounted to 87.5 gr., while the 24 hour loss during that period came to 111 gr.—a difference of 23.5 gr. Six days' consumption of seeds and grain alone amounted to 69.3 gr., while the loss was 106.8 gr., giving a difference of 37.5 gr. This difference I suppose was made up by water; when some liquid was provided in the shape of milk, the discepancy between food and total loss was 21.2% of the latter; with only dry provender, it was 35.1%. The daily consumption of seeds and grain varied between 10.3 and 12.9 gr., averaging 11.6 gr. for one bird; the assumed consumption of water varied between 5.4 and 6.7 gr., averaging 6.2 gr.—MARGARET MORSE NICE, *Columbus, Ohio.*

The Field Marks of the Black Vulture (Coragyps urubu).—While in Charleston, S. C., during the A. O. U. meeting, I made an effort to work out a definite the field identification mark for the Black Vulture. In former years they gathered round the market, but today they are to be found on a dump on the eastern edge of the city along the Cooper River. There were about 400 of this species present together with some of the Turkey Vulture (*Cathartes aura septentrionalis*). Coues, in the fifth edition of his 'Key to North American Birds,' makes several statements that are not concurrent with my personal experiences. In contrasting the two in flight, he has this to say, "Catharista [Black Vulture] never sails for any distance without interrupting that easy motion by flapping the wings." On the contrary, I have seen these birds soar for hours without once moving their wings. However, when they are apparently headed for some distant point, they fly in close formation with much flapping. Frequently they soar in the high winds as easily as Cathartes. Coues, in further describing the Black Vulture in flight, remarks, "The ends of the quills are neither spread apart nor bent upward." In every instance I have found the opposite of this to be true. While the tips of the wings are bent up in both species the wings of the Turkey Vulture gradually taper upward, the quills being spread but in the Black Vulture only the quills turn up. At the end of each wing in the Black Vulture there is a white patch, visible from above and below, caused by the white shafts of the primaries. The undersurface of the wings of Turkey Vulture on the other hand is white for three fourths of its inner area, seen only from below.

In distinguishing the tail of the Black Vulture from that of the Turkey Vulture, Coues says, "Shorter and more rounded tail." Its tail is shorter but it is distinctly squared, whereas the Turkey Vulture's tail is quite rounded. The wrist joint of the Black Vulture, too, is held quite straight in flight while in the Turkey Vulture it is held at a distinct angle but this

does not always hold true. The only absolute distinction between them in the field seems to be the difference in the position of the white patches on the wings. Young Turkey Vultures have dark heads, so the color of the head will not always identify them. I believe most writers have placed too much emphasis upon the flapping and soaring flight of the Black Vulture as a field character, because the Turkey Vulture also indulges at times in this manner of flight.

While the Black as already stated does not always do so, I found that the Black Vultures near Washington had the same appearance and traits as those at Charleston, so they probably hold good throughout their range.—William Howard Ball, *1233 Irving St., N. W., Washington, D. C.*

A Duck Hawk Views the Inaugural Ceremonies.—The ceremonies attendant on the inauguration of our new President on March 4 last, an event of nation wide interest calling patriotic Americans to Washington by the thousands, was viewed by one noble visitor whose presence though overlooked by the reporters of the daily press intent with pencil and camera on recording the events of that notable day, may well be recorded in the pages of 'The Auk.' High above Pennsylvania Avenue in a seat of vantage on an ornament of the central tower of the Post Office building, a seat beyond the purview of the ticket speculator in the street below, rested a fine Peregrine Falcon, watching calmly but intently the great crowds that thronged the line of march, crowded the windows of buildings, and even spread to adjacent roofs along the avenue.

There passed the newly installed chief of the nation, governors of states, and other persons permanently or temporarily famous, groups of marching cavalry, soldiers, bands giving vent to bursts of martial music, all moving along the historic avenue beneath the eye of the watchful bird. Airplanes bearing radio announcers following a measured course up and down, passing with other planes on several occasions within two hundred yards were given no more attention than the Pigeons that from time to time darted in rapid flight into the towers and cornices near at hand. In fact toward the latter there was evinced a more active interest as they were followed with intent glance and craning neck as a possible source of the next meal. Nine service planes flying in formation not more than five hundred feet overhead followed closely by nine more in like alignment likewise received scant attention, and not until the great dirigible "Los Angeles" with an attendant guard of four lesser lighter-than-air ships hove slowly in view, nosing along like great, aerial whales, did the Duck Hawk lose his composure and fly off toward the Potomac, probably excusing his final lack of poise by remarking like many of the foot passengers turning homeward through the downpour on the streets below: "Oh, well, I've seen the main part of the show; its raining, and I guess I'll be along toward home!"—Alexander Wetmore, *U. S. National Museum, Washington, D. C.*

Can the Cooper's Hawk Kill a Crow?—A female Cooper's Hawk

(*Accipiter cooperi*), killed by Mr. Floyd Plasterer near Shippensburg, Franklin County, Pennsylvania, on December 8, 1928, was brought to this office for identification. Upon examination the stomach and crop proved to be packed with the feathers and flesh of a Crow (*Corvus brachyrhynchos brachyrhynchos*).

Being interested in determining whether this relatively small Hawk can actually kill a Crow I talked with Mr. Plasterer concerning the bird. "Many Crows were in the vicinity," said Mr. Plasterer. "As we walked along the edge of a field the Hawk flew up from a weed patch and my brother shot it. Upon going to pick it up we were surprised to see another Hawk fly up from the same weed patch. Among the weeds we found the partly eaten and fairly well plucked body of a Crow, the flesh still warm."

We can offer no proof that the Hawks killed their meal, of course, but no shots had been heard nor hunters seen in the vicinity so it is natural for us to believe that one *or both* of the Hawks might actually have killed the Crow.

I note that Mr. E. H. Forbush (Birds of Massachusetts, Vol. II, p. 114) states that Mr. Aaron C. Bagg reported to him a Crow which had been disabled by a Cooper's Hawk. In the light of Mr. Plasterer's experience in Pennsylvania it appears that the Cooper's Hawk may occasionally prey upon this common, though large, quarry. The Cooper's Hawk which had been feeding on Crow weighed 22 ounces; a Crow taken in the vicinity on the same day weighed 18½ ounces.—George Miksch Sutton, *Game Commission, Harrisburg, Pa.*

The Barn Owl (Tyto alba pratincola) in Manitoba.—On C. G. Harrold's return from a trip to Whitewater Lake in October, he told me of a report he had received from a visitor to his camp, of a "Monkey-faced Owl" in the possession of Mr. Wilfred B. Kirkwood of Deloraine, Man. Interpreting this as a Barn Owl, Mr. Harrold asked me to write Mr. Kirkwood for confirmation. Mr. Kirkwood's reply was accompanied by two excellent photographs, which establish the identity of the bird beyond question. He writes: "This owl was shot just after sundown one evening around the first week in October 1927, a mile northwest of Whitewater Lake on my own farm, this being eight miles northeast of Deloraine. I had this bird set up by J. S. Charlston at Brandon, Man." This constitutes the second record for the species in Manitoba. The first record is represented by a specimen in the collection of the late E. W. Darbey and bears the legend "Shot at St. Annes, Nov. 6th, 1912."—B. W. Cartwright, *Deer Lodge, Winnipeg, Manitoba.*

The Chuck-wills-widow in Indiana.—Last spring in company with Mr. S. E. Perkins III, I visited the bird collection at Shortridge High School, Indianapolis, Indiana. Miss Rousseau McClellan, the teacher in charge, very kindly showed us the specimens. Our attention was drawn to some bird skins that were in pieces through much handling by pupils. Among these appeared the head of a Chuck-wills-widow (*Antrostomus*

carolinensis). Miss McClellan said it had been taken in Indianapolis and promised to look up the record. Later she informed me it was brought to her by one of her pupils in April or May, 1908. It was found dead opposite public school No. 10 at the old Medical School building. Evidently it had flown against the brick wall. It was perfectly fresh when brought to her. She made a skin of it and put it in their collection of birds.

This is the first record of this bird from Indiana, verified by a specimen, and the farthest northern point in the state from which it has been reported. April 20, 1878, Robert Ridgway and William Brewster identified this species on the Indiana side of the Wabash River in Knox County but did not take a specimen. The former says: "I have both seen the Chuck-wills-widow, and frequently heard its unmistakable note in Knox County, Ind., immediately opposite Mt. Carmel" (Ill.).[1] I am informed by Mr. Roy Chansler that he has at different times in recent years heard the distinctive note of this bird in Knox County.—Amos W. Butler, *Indianapolis, Indiana.*

The Rufus Hummingbird (Selasphorus rufus) in South Carolina.—One of the many pleasing results of the recent A. O. U. meeting in Charleston, S. C., was the bringing out of the fact that a new bird had been added to South Carolina's avifauna many years ago, the identity of which had, for a long time, been overlooked.

Several members were looking over the study collection of skins one morning in the preparation room of the Museum, when Mr. J. H. Riley called the attention of a little group to the peculiar manner in which the skin of a Hummingbird had been preserved. It was flattened out under a small piece of glass, bound around with strips of passe partout. I recall that Messrs. Swarth, Fleming, Maillard and myself were the ones addressed. I recognized the specimen immediately, having seen it in the collection for many years, and mentioned the fact that it was so preserved because of the very tender condition of the skin when the bird was taken. My remark that the bird had been taken locally caused some surprise among these gentlemen, who saw at once that it was not a Ruby-throated Hummingbird (*Archilochus colubris*), although it was labelled as such on the reverse of the mounting card, and had been accepted as such for many years. I asked Mr. Riley to take it to Washington with him and identify it, which he did, writing me that the bird was a Rufus Hummingbird (*Selasphorus rufus*). As far as we have been able to ascertain, this is the sole record for this western species in the East.

The circumstances are as follows: On December 18, 1909, the bird was taken in the yard of a Charleston dwelling by Mr. Edward A. Hyer, who, realizing the value of a Hummingbird taken in South Carolina during the winter, took it to the Charleston Museum at once. It was skinned by Mr. B. Rhett Chamberlain, and because of the very fragile condition of

[1] Butler, Birds of Ind. 1897, pp. 846–847.

the skin, was preserved as described above. It was identified at the time by all who saw it as a Ruby-throat. Indeed, the question of its being anything else never entered anyone's mind. Since that time, it has lain in the Museum's study collection and has been seen by several ornithologists. When I joined the staff some years ago, I knew of the bird, of course, but that it was anything else than the label indicated, did not cross my mind. My experience with Hummingbirds other than the Ruby-throat is nil, and but for the sharp eyes of Mr. Riley, the bird would no doubt have remained for many more years under its wrong identification. This specimen has been twice recorded as a Ruby-throat, once in the Charleston Museum 'Bulletin,' vol. VI, 1910, p. 10, and once in Wayne's 'Birds of South Carolina,' as an editorial footnote on page 98.

When the correct details were ascertained I at once wrote Mr. Hyer, who is with the Kent Scientific Museum of Grand Rapids, Mich., telling him of it, and he has asked me to record the specimen.—ALEXANDER SPRUNT, JR., *92 South Battery, Charleston, S. C.*

Ruby-throated Hummingbird Wintering in Northern Florida.—January 17, 1929, I observed a Ruby-throated Hummingbird (*Archilochus colubris*) feeding among the blooms of the single pink Japonica trees in our front yard in Tallahassee, Florida. The bird was seen again on the 19th and 26th, possibly the same individual. I am convinced that the species winters in northern Florida in small numbers. At this season several kinds of plants and shrubs are in full bloom, especially the Japonicas which furnish ample insect and other food for those of the Hummingbirds that are hardy enough to remain in a section visited occasionally in winter by sufficient cold to produce very substantial crusts of ice on exposed pools and the like. A Hummingbird is reported to have been seen in Pensacola, Florida, in the same latitude as Tallahassee, on February 20, 1927 (Weston—Bird-Lore, XXIX, 199). These two observations extend the winter range of the Hummingbird in Florida considerably farther north than any previous record.—ROBERT W. WILLIAMS, *Department of Agriculture, Washington, D. C.*

Possible Reasoning Power in a Phoebe.—The following occurrence is not a recent observation, but one that happened in my boyhood and has remained vividly in my memory. I regret that I had not formed the habit of recording notes at the time. I am not even sure of the year in which it occurred, though it was probably between 1900 and 1904, but memory of events in our youth is often clearer, stronger and more accurate than memory of much more recent events. About the time that this observation was made I read somewhere a warning against assuming too readily that birds and animals had reasoning power when they did things that seemed remarkable. This led me to note the event in this case carefully and ponder over it, so that I do not doubt that the facts as I remember them are essentially as they occurred.

Back of West Rock, at New Haven, Conn., a brook flows out of Wintergreen Lake. Beside this brook was a large rock of red sandstone. The face toward the stream was almost smooth and vertical, but the upper part jutted out and overhung the face by several inches. On the face of this rock, beneath the overhanging portion, a Phoebe built its nest for several years in succession. This nest was plastered against the face of the rock, with no support beneath, but held up by the adhesive power of the mud in its structure.

I was usually able to examine this nest from the opposite side of the stream, but one year the brook was swollen by heavy rains, and not being able to approach close enough to see the contents, I crossed the stream and reached around the edge of the rock to feel what the contents might be. As I did so I lost my balance and in regaining it, loosened the nest from its hold on the rock. I managed to catch it, though one of its five eggs was spilled into the stream. A foot or two below the nest site was a projection on the rock large enough to hold the nest, so I placed it on this projection. The bird returned to the nest and hatched out the young successfully, though whether the young grew to maturity and left the nest without mishap I do not know.

The following year a Phoebe returned and rebuilt the nest in the old location beneath the jutting rock. Underneath the center of the nest was a vertical column of mud and moss three or four inches long!

Now of course I cannot prove that this Phoebe was the same bird that had nested there previously, nor that the supporting column was anything but an accident. There is room for the skeptic to doubt if he wishes. But I have never seen another Phoebe's nest like this one. That the bird was the same one, and that it remembered the incident of the year before, and reasoned that a support beneath would prevent a similar accident may seem too much to assume, so I have recorded the incident for what it is worth, and will let the reader think what he pleases. Yet it is quite possible that many of our birds have stronger reasoning powers than we are inclined to credit them with.—Aretas A. Saunders. *Fairfield, Conn.*

The American Three-toed Woodpecker in Luce County, Michigan.—On February 1, 1928, I saw one of these Woodpeckers (*Picoides americanus americanus*) in a large tamarack swamp near the East Branch of the Fox River about two and a quarter miles south and nearly seven miles west of McMillan, Luce County, Michigan. The bird was at work on a dead tamarack and the white bars on its back and other markings which distinguish the species were easily seen through a pocket field glass.

Another or possibly the same bird was seen near the same place on February 2 and on February 15 one was heard and located about four feet up on a dead tamarack about twenty-five feet from where I was pealing a post. It flew within arms reach above me to another tree and then to still another where it was caught by my father who went slowly up to it as it was busy digging for food.

I banded it and released it at 3:20 P. M. and next day at 8:25 A. M. I saw a bird of this species wearing a band, which was almost certainly the same individual. On February 18 an individual of the same species was seen but no band could be detected.—Oscar McKinley Bryens, *McMillan, Luce County, Michigan.*

A Note on Brachygalba goeringi Sclater.—In studying, recently, the collection of birds received some years ago by the Academy of Natural Sciences, of Philadelphia, from M. A. Carriker, Jr., I came upon two specimens of *Brachygalba goeringi* from Palmar, Province of Boyaca, Colombia, collected April 24, 1915 (Nos. 73608 ♂, 73609 ♀). Mr. Todd wrote me from the Carnegie Museum, Pittsburgh, that he had four skins from Palmar, taken by the same collector, and that they were identical with skins of *B. goeringi* from Venezuela. After looking through the Library of the Academy and the Zoological Record (1918–1927), I find no record of this species from Colombia and record these specimens as apparently extending its known range. Therefore, in addition to "Northern Venezuela" as stated by Cory (Field Museum Publications, Zoological Series, 1919) the range should include the area around Palmar, Boyaca, Colombia.

Dr. Chapman's collectors did not secure any specimens in Colombia, although they were in the same general locality; whether this means that the bird has an extremely limited range in Colombia, more particularly Boyaca, or proves that much more collecting should be carried on in this region, is an open question.—C. Eliot Underdown, *Academy of Natural Sciences, Philadelphia, Pa.*

Northern Raven (Corvus corax principalis) in Rockbridge County, Virginia.—The Raven is rare enough now in our southern mountains to make its occurrence worthy of report. I have been for some time reasonably sure that Ravens were to be found in one section of this county. I have had dependable enough reports to make me believe that a few were resident around Goshen Pass, where the Maury River makes a three mile gorge through the eastern-most high range of the Alleghanies. A young man who has camped often in the Pass has told me that he had seen three or four at a time in the early morning on the ground near the Maury Monument in the Pass. One of the farmers in that section tells me that they occasionally come out from Hogback Mountain over the neighboring farm lands. And finally Mr. M. G. Lewis, County Farm Agent, who is a careful bird student, reported to me that he had seen two near the river at some distance from the Pass on December 4, 1928.

In spite of this evidence of their occurrence, one observed by me on January 4, 1929, was the first that I had been able to see in several years of fairly constant field trips. On this date I was looking for Hawks in the flats along the Maury River opposite some high wooded cliffs. The spot is some ten miles down the river from the Pass, in a secluded and thinly settled region. I had been watching at close range a Duck Hawk, which

is the first occurrence for this immediate section for which I have any evidence. Soon afterwards I had the unusual pleasure of seeing in the air over me at one time two Red-tailed Hawks, a Black Vulture, a Bald Eagle, and a Raven. I had been watching the Hawks when the Eagle appeared higher up. While I had my glasses on the Eagle, I heard a hoarse "cra-ak," and about two hundred yards over my head was the Raven. I watched the bird for five or ten minutes and was positive of the identification. The Raven was soaring most of the time in small circles and calling at frequent intervals. I had the opportunity to compare the size both with the Red-tailed Hawks, which were still near and were also soaring, and with some Crows which flew past. The diamond-shaped tail, in marked contrast with the rounded tails of the Crows, was very evident. The Raven rose higher and higher and finally disappeared in the direction of Goshen Pass. —JAMES J. MURRAY, *Lexington, Virginia.*

Bill Deformity in a Blue Jay.—Late one fall several years ago, while hunting in a strip of woods in the Columbia Heights district of Minneapolis, Minnesota, my attention was arrested by the peculiar actions of one member of a small flock of Blue Jays that was moving leisurely through this patch of woods. The bird in question was perched upon a horizontal limb of an oak and was evidently struggling to grasp with its bill some object of food which presumably it had carried to the limb to eat, but the nature of which I was unable to make out at the distance.

Its efforts to seize the object, whatever it was, were so extraordinary that I shot the bird in order to learn if possible what unusual item of food it had managed to secure. When I reached the spot I looked about first for the expected object of interest, but failing to find any such thing I turned my attention to the dead bird itself and then discovered the rather remarkable deformity of the bill here reported, and which, I was immediately convinced, was alone sufficient to explain the unusual behavior of the bird.

The deformity consisted of a dorsally bent upper mandible, the bend occurring just behind the anterior margins of the nares, with the affected premaxillary portion forming an angle of forty-five degrees with the basal plane of the skull. The condition was such that when the bill was held closed a considerable part of the tongue remained exposed, and it seemed hardly possible that the bird could have picked up any food with such a beak.

In the cleaned skull, with the horny sheaths of the bill removed by maceration, the bend is seen to include also the anterior tips of the palatines. The transverse direction of the bend is oblique to the horizontal plane of the skull, so that the upwardly bent premaxillary presents further a distinct rotation to the right on its own long axis.

With regard to the possible cause of the deformity, neither the horny nor the bony parts of the bill presented any clear evidence of mechanical injury, such as a break or a shot wound, and the most plausible explana-

tion would seem to be that the part had become bent in this manner, perhaps through some accident, while the bird was in the early nestling stage and its bill soft and pliable. But again it may be possible that the condition arose as a developmental abnormality in some pre-hatching stage.

The bird was in good condition of flesh, and one can hardly help marveling just a little that it had been able to maintain an existence, not only so well but at all, with what would appear at least to be a rather severe handicap.—CHARLES E. JOHNSON, *Roosevelt Wild Life Forest Exper. Station, N. Y. State College of Forestry, Syracuse.*

Red-winged Blackbirds Wintering in Ohio.—About the Lily Pond in the Shaker Lakes Park in Cleveland, Ohio, there is a considerable growth of cat-tails, affording a popular haunt of Red-winged Blackbirds (*Agelaius phoeniceus phoeniceus*). The last flock of Blackbirds left the pond in the second week of November, 1928, but on the 18th, and on nearly every subsequent visit, I found two of the birds. These were evidently females, since both were heavily streaked above and below and had a light, buffy line over the eye. I saw the birds last on January 26, 1929. My next visit to the park, two weeks later, came after a succession of days with the temperature consistently below the average for the season with several heavy snow-falls, and this circumstance probably sent them out in search of food or a warmer climate.

It might be of interest to compare this notation with the records of Red-wings in the 'Bird-Lore' Christmas Census for 1927 and 1928 in the northern states east of the Mississippi. In 1927 a total of 10 stations of 131 reporting listed these birds, while in 1928 the number had increased to 17 out of 127 stations. In each year the season immediately preceding had been reported as unusually warm and moist throughout most of the region. —WILLIAM H. WATTERSON, *Cleveland, Ohio.*

Snow Buntings Taking Insect Food.—On February 17, 1929 at Auburn, Geauga County, Ohio, I observed a flock of about 85 Snow Buntings (*Plectrophenax nivalis nivalis*) feeding on a stretch of bare snow in a field. Inspection revealed that the surface of the snow was well dotted with snow fleas (*Collembola*), the day being warm and suited to the habits of this insect, and I am sure that the birds were finding them a welcome addition to their regular seed diet. There had been a snow-fall a few hours before of sufficient volume to cover any seeds which might have blown onto the surface of the snow, which was level and entirely free from plants here. It is interesting to note that the Buntings, when flushed, flew to the top branches of a tall chestnut tree nearby.

From the various sources which I have consulted I find that the food of the Snow Bunting is considered by many to be entirely vegetable, while of those which mention animal food, none includes this rather obvious type. It would seem that snow fleas should provide an abundant supply of insect food in the late weeks of this bird's visit to the eastern United States.—WILLIAM H. WATTERSON, *Cleveland, Ohio.*

Nelson's Sparrow in Maryland.—Though Nelson's Sparrow (*Ammospiza caudacuta nelsoni*) has been recorded on the Atlantic coast from Massachusetts south to Titusville and Cedar Keys, Florida (the coastal regions of South Carolina, Georgia, and Florida being apparently the chief wintering grounds for this race) until the present, there seems to have been no definite report for the State of Maryland. On October 6, 1928, while collecting near Ocean City, Maryland, we found Sharp-tailed Sparrows common in a stretch of marsh below the inlet leading into Sinepuxent Bay. Among other specimens secured on this occasion there is an immature male Nelson's Sparrow collected by Lincoln. On October 14 at Cornfield Harbour, about a mile above Point Lookout where the Potomac River joins Chesapeake Bay, we found Sharp-tailed Sparrows again common, and collected three additional specimens of *nelsoni*, all males, one being adult and two immature. In both instances the birds were associated with true *Ammospiza caudacuta caudacuta* in coastal marshes but in areas where fresh water rather than brackish water conditions prevailed. —Alexander Wetmore and Frederick C. Lincoln, *Washington, D. C.*

Natal Down and Juvenal Plumage of the Acadian Sharp-tailed Sparrow.—In studying the series of six Acadian Sharp-tailed Sparrows (*Ammospiza caudacuta subvirgata*) in juvenal plumage, collected by Mr. V. E. Gould and myself near Wolfville, Nova Scotia, I have found a few discrepancies in published descriptions. The specimens range from nestlings with the juvenal feathers just breaking the sheaths to fully feathered individuals with their tails nearly full grown. The specimens are now in the Cornell University collection, numbers 3334 to 3339.

When Dwight separated this race (Auk IV, p. 234, 1887), he described the juvenal plumage, from birds out of the nest, as follows, "General color chestnut buff, darker above and variegated with black. Traces of two or three faint dusky streak on sides. Dorsal feathers, tertials, wing coverts, and stripes on the head, black with chestnut buff edgings. Primaries and secondaries black, faintly edged with ashy. Traces of dusky auriculars and post-ocular streak. Tail similar to adult but edged with buff."

My specimens compare fairly well with this description but the streaks on the sides of the breast are hardly discernible in any but the most fully fledged birds and the general color compares more favorably in young birds with Ridgway's ochraceous buff and in the older specimens with his ochraceous tawny. The dusky areas of the face in the fully fledged young are caused by the tips of the feathers being black and in the younger birds, when only the tips show, these dusky areas appear as black lines. The buffy tips to the feathers of the upper parts are so wide that they give the appearance of being entirely yellowish.

The natal down is still clinging to the tips of the feathers of the juvenal plumage in the four youngest specimens. Compared with Ridgway's 'Color Standards and Nomenclature,' the natal down varies from brownish black on the head to mouse grey on the rump. It is entirely absent from

the ventral and crural feather tracts and somewhat unevenly distributed on the capital, dorsal, humeral, and femoral tracts, and on the greater coverts. It is heaviest on the sides of the head and on the rump.

A description by Lewis (Auk 37, p. 588, 1920) of the living young birds in a nest at Yarmouth is as follows, "A stripe over each eye and one in the center of the crown were buffy; the rest of the upperparts were fuscous, the feathers were tipped with buffy, the sides of the throat were buffy, the sides of the breast whitish streaked with fuscous, and the sides of the belly whitish." This description does not correspond to Dwight's description nor with my specimens nor with my notes on the young in the nest, in several particulars, especially the underparts.

The date, June 12, 1920, on which Lewis found this nest with young "partly feathered and nearly ready to leave the nest" is also unusual, it being early for Nova Scotia.

At this stage in their development, they must have been about a week old. Allowing twelve days for incubation and three for nest building, the birds must have started building May 21st. At this date the Acadian Sharp-tailed Sparrows have ordinarily not yet arrived in the Province. The earliest first arrival dates which I have are June 3, 1923, and June 4, 1925. Quoting a letter from Mr. R. W. Tufts, who has been familiar with the birds in Nova Scotia for at least thirty years: "I never saw the Sharp-tail until so late that I always felt that I had missed the first one, and felt that the late 'first seen' was of no value. I have accurate and clear recollections of this fact and it was about June 1st that they showed up."

He visited the region about Yarmouth Harbor May 29, 1925, and spent part of two days searching for nests without even seeing a bird. Returning June 17 of the same year, he found the meadows containing the usual number of birds and found several nests with fresh or slightly incubated eggs. At Wolfville, from 1925 to 1928 R. W. Tufts has found quite a number of nests between June 20 and July 1, all containing eggs in various stages of incubation. Some sets June 29 and 30 were fresh or only slightly incubated. I found nests July 16, 1928 and July 20, 1928 and those out of the nest and with the tail partly grown are dated July 21, 1928 and September 8, 1928.

Savannah Sparrows are common over all these areas, arriving the first of April and raising several broods. Is it not possible that Lewis may have found a nest of this species since both the date and the description of the young fit it better than they do the Acadian Sharp-tailed Sparrow?—A. L. Rand, *Laboratory of Ornithology, Cornell University.*

Gambel's Sparrow in Illinois and Michigan.—In looking over the Gregory collection, Mr. A. J. van Rossem found two specimens which he believed were Gambel's Sparrow (*Zonotrichia leucophrys gambeli*). A comparison of these with the skins in the Field Museum of Natural History proved that he was correct. One is an adult male taken at Waukegan, Lake County, Illinois, on May 14, 1922. The other, an immature male,

was collected at Huron Mountain, Marquette County, Michigan, on October 12, 1924.

An examination of the Field Museum specimens also disclosed the fact that No. 21447, a female collected by J. F. Ferry at Beach, Lake County, Illinois, on October 6, 1906, belongs to this subspecies and not to *Zonotrichia leucophrys leucophrys* as given on the original label.

We have not been able to find any other authentic record of the occurrence of this race in either Illinois or Michigan.—JOHN T. ZIMMER, *Field Museum of Natural History, Chicago, Ill.* and STEPHEN S. GREGORY, JR., *Winnetka, Ill.*

Haplochelidon, a New Genus of Swallows.—When Mr. Ridgway dismembered the old genus *Atticora* Boie some years ago (Bull. 50, U. S. Nat. Museum, pt. III, 1902, 27) he placed each species in a genus by itself with the exception of *Hirundo andecola* D'Orbigny and Lafresnaye, which he retained in *Orochelidon*, the type of which is *Petrochelidon murina* Cassin. He indicated, however, that it was different from the type species, and examination of specimens confirms his observations. *"H." andecola* differs conspicuously from *Orochelidon murina* in its nearly even instead of forked tail, and particularly in its very long, full, and broad under tail-coverts, which fall short of the tip of the tail by only about 10 mm. These characters are in my opinion amply sufficient to justify the generic separation of this species under the name *Haplochelidon*, of which it is hereby made the type. It is certainly as good a genus, at any rate, as the others which Mr. Ridgway recognizes as composing the original group *Atticora*. I cannot follow Dr. Chapman (American Museum Novitates, No. 138, 1924, 12) in referring this species to *Petrochelidon*, the very points he brings up arguing against such a disposition.—W. E. CLYDE TODD, *Carnegie Museum, Pittsburgh, Pa.*

House Sparrow Adopts Unusual Method of Feeding.—On the morning of November 8, 1928, while walking along a street near the north edge of the city of Sanford, Florida, I observed a European House Sparrow (*Passer d. domesticus*) clinging to the front of the radiator of a Model T Ford car which was parked at the curbing. Curious to know what the bird might be doing in such a position I stopped a moment to investigate.

During the autumn season butterflies are common along the roads in this section of Florida and motor cars that have been driven through the countryside often present a gaudy appearance when viewed head-on; for, usually from two to a dozen or more lepidoptera of various hues have become caught on the radiators.

This car was no exception in that its radiator carried two butterflies between the leaves supporting the radiator tubes. The Sparrow was busily engaged in extracting therefrom what appeared to be a pierid butterfly, and having successfully accomplished its purpose it flew away with its booty.—DAYTON STONER, *U. S. Entomological Laboratory, Sanford, Florida.*

Birds on Board Ship between Nova Scotia and New York City.—The following notes were made on a steamship voyage from Windsor, Nova Scotia, to New York City, September 22–25, 1928.

Leaving Windsor at dark on the night of September 22, at daybreak, about 6 o'clock, we were at the mouth of the Bay of Fundy, and, would have been, the Captain said, within sight of Grand Manan, but for the low visibility due to the fog. It cleared about noon and was a beautiful day with no land in sight, nor even a sail. We crossed the shoals off Cape Cod about 4:30 o'clock and the next morning at dawn were in Nantucket Sound with the land just sinking below the horizon behind us. The course lay down Vineyard Sound and we passed the island of Marthas Vineyard about 9 o'clock that morning, Block Island about 12:30 o'clock, and continued down the Atlantic coast of Long Island. We arrived at Staten Island some time during the night for in the morning we were tied up in the quarantine station.

The weather was fine on the trip and the winds moderate, from the south.

Most of the trip was comparatively near land and I had expected birds to be common at this time of the year, but this did not prove to be the case. Gannets appeared some distance off the Bay of Fundy, Gulls were common only at the mouth of the Bay, in Nantucket Sound, and in New York Harbor. Sometimes hours passed without the appearance of a bird.

The shore birds listed passed the ship at the mouth of the Bay of Fundy, and just off Rock Island.

The land birds of four species came aboard just outside the Bay of Fundy, another just before reaching Block Island, and still another off Long Island.

The following are the species observed:

Sula bassana. GANNET.—Four appeared some forty miles from the mouth of the Bay of Fundy.

Larus marinus. BLACK-BACKED GULL.—Several, at daylight, at the mouth of the Bay, did not follow the ship, but about 5 o'clock, some one-hundred and twenty miles further, one did follow, and that for some time.

Larus argentatus. HERRING GULL.—Several at the mouth of the Bay of Fundy. Occasionally one was sighted during the afternoon. Fairly common in Nantucket Sound, where they followed the ship, until fed. Rarely seen after passing Marthas Vineyard. Common again in New York Harbor.

Larus atricilla. LAUGHING GULL.—Several in Nantucket Sound, some following the ship; common in New York Harbor.

Charadrius semipalmatus. SEMIPALMATED PLOVER.—At the mouth of the Bay of Fundy, two flew by low, headed south, about ten minutes apart.

Crocethia alba. SANDERLING.—Three darted by the ship, off Block Island, going in that direction.

Passerculus sandwichensis savanna. SAVANNAH SPARROW.—One came aboard just outside the mouth of the Bay of Fundy and stayed all day though it was not tame. Another passed us near Marthas Vineyard.

Spiza americana. DICKCISSEL.—About 6 o'clock in the morning of September 23, at the mouth of the Bay of Fundy, when it was just getting light, a pair of Pipit-like birds circled about the rigging and may have lit on board though I was unable to find them. At 7:30 o'clock I saw the same or two very similar birds, one of which gave a call with which I was familiar. This time I was able to locate one of the birds when it lit on the deck and winches, and was able to study it at close range and to compare it with the description in Chapman's 'Handbook of Birds of Eastern North America.' It proved to be a Dickcissel, evidently a male in winter plumage since the throat patch, though present, was veiled. This record, so far north and east of its normal range is of especial interest when taken in connection with the other records of its occurence in the east in 1928 (Auk XLV, pp. 507–509, 1928) and Stone's comment (Ibid) on its return to its former range on the Atlantic coast. Gross (Auk 38, p. 4, 1921) lists five records for its occurrence north and east of Massachusetts; three for Maine, one for New Hampshire, and one for Nova Scotia. Besides these there is a record from Anticosti (Lewis, Can. Field Naturalist, 38, p. 127. 1924) and one for Prince Edward Island (Mac Swain, John. Tran. and Proc. Nova Scotia Inst. Science, XI, pp. 570–592, 1906). These with the present one make eight scattered over a period of forty-four years.

Dendroica striata. BLACKPOLL WARBLER.—One came aboard toward evening, September 24, off Long Island; it was not at all exhausted.

Dendroica palmarum hypochrysea. YELLOW PALM WARBLER.—One came aboard just outside the Bay of Fundy and stayed for a short time. It showed no fatigue.

Geothlypis trichas trichas. MARYLAND YELLOW-THROAT.—At the mouth of the Bay of Fundy, at daybreak, one was blown aboard exhausted. It stayed nearly all day and became quite tame.—A. L. RAND, *Laboratory of Ornithology, Cornell University, Ithaca, N. Y.*

Notes from Long Island, New York. *Sterna fuscata.* SOOTY TERN.—On December 24, 1928 at Hampton Bays, L. I., I found a dead Sooty Tern in a badly decomposed condition, probably having been there since the hurricane of September 19. It was on the ocean beach directly opposite Shinnecock Light House and about ten miles east of where I found my first Sooty Tern (see Auk XLVI, 1929, p. 101). It was on the beach hills in the grass about 300 feet from the ocean front. The bird was sent to the American Museum of Natural History.

Alca torda. RAZOR-BILLED AUK.—The following dead Auks were picked up on the ocean beach of the south shore of Long Island: one on December 23, 1928 at Westhampton; one on December 27 at Montauk Point; one on December 27 and two on December 29 at Amagansett. All of these Auks had oil upon their breast feathers.

Alle alle. DOVEKIE.—The following dead Dovekies were picked up on the ocean beach of the south shore of Long Island. I searched the beach for eleven miles and found fifty-five Dovekies. The dates, locality and

number of birds found per mile are as follows: at Westhampton: one on December 7, 1928 one on December 16 and four on December 17 or an average of 1.5 birds per mile. At Amagansett: four on December 27, nineteen on December 29 or an average of 7 birds per mile. At Montauk: fifteen on December 27 and eight on December 29 or an average of 9.2 birds per mile. At Montauk Point: three on December 27 or an average of 3 birds per mile. Only two of the Dovekies had no oil upon them, all of the rest having oil upon their breast feathers. Mr. Ludlow Griscom in 'Birds of the New York City Region' gives some 20 records of Dovekies for Long Island in the last 40 years.—LEROY WILCOX, *Speonk, L. I., N. Y.*

Three Interesting Records from South Carolina.—The following notes are from my rice fields at Sandy Knowe, along the winding strip of water known as the Thoroughfare, which connects the Peedee and Waccamaw Rivers, S. C. The observations slightly alter the local status of three species, according to the accounts in Wayne's 'Birds of South Carolina.' Identifications were made or confirmed by my guests Drs. Frank M. Chapman and Robert Cushman Murphy.

Chaulelasmus streperus. GADWALL.—One was shot during the middle of November, 1927, and two on November 17, 1928. The species was not familiar to the experienced negroes who care for the ducking grounds.

Spatula clypeata. SHOVELLER.—Examples shot during November of both 1927 and 1928. On November 24, 1928, many small flocks were observed, associating more or less with Mallards and Wood Ducks. As the "spoonbill" this duck is so familiar to the negroes that it must be a commoner bird than has been realized.

Grus mexicana. SANDHILL CRANE.—Dr. Murphy observed one at close range from a blind on the afternoon of November 23, 1928. Atlantic coast records north of Florida are now rare; nevertheless, the bird seemed perfectly familiar to the negro duck-man who also saw it, and who called it a "kronky." I have not been able to trace this name, though it is strangely like *Kranich* and other Teutonic forms of the word crane.—JESSE METCALF, *Hasty Point Plantation, Georgetown, S. C.*

Some Recent Records from Coastal South Carolina. *Oidemia americana.* AMERICAN SCOTER.—While walking along the front beach of Seabrook's Island, S. C., on January 31, 1929 in company with Francis M. Weston, of Pensacola, Florida, a flock of eight of these birds was seen. They were about two hundred yards distant, just beyond the surf line, and we watched them for some time through 6 x binoculars. The light was excellent, and the birds maneuvered into every possible position, showing views from all angles. They showed absolutely no white markings whatever, being of a uniform black. Both of us are thoroughly familiar with the Surf Scoter (*Oidemia perspicillata*), and Mr. Weston with the White-winged Scoter (*Oidemia deglandi*), and these birds were certainly not of either species. There is room, of course, for the possibility of their being

the European species, but this is highly improbable. The American Scoter has been recorded from South Carolina on but two former occasions, so that the presence of these birds is of great interest. The flock consisted of seven drakes, and one female.

Calidris canutus rufus. KNOT.—The writer recorded, in 'The Auk,' Vol. XLV, p. 206, the occurrence of the Knot on the Atlantic coast in winter, as a rarity. Being interested to ascertain whether any would be seen this winter, I am glad to be able to say that on December 13, 1928, a small flock was seen on Edingsville Beach, on January 7, 1929, four seen at Folly Island, and February 7, a flock of five on Seabrook's Island. These records, together with those of last year certainly point to the fact that this species winters regularly on the Atlantic coast as far north as Charleston, S. C.

Charadrius melodus. PIPING PLOVER.—On February 7, two specimens were seen on Seabrook's Island, S. C., by Messrs. Francis M. Weston, Herbert R. Sass, and the writer. One of the birds had an injured foot which seemed to cause it considerable annoyance. Both allowed close approach, and were seen feeding and resting. This is but the second positive record for the species on the South Carolina coast in winter. On February 9, 1928, one was seen on Dewees Island, S. C., by Messrs. Arthur T. Wayne, F. M. Weston, and the writer.

Limosa fedoa. MARBLED GODWIT.—A fine specimen seen in a small gully near the front beach of Seabrook's Island, S. C., on February 7, 1928. Messrs. Weston, Sass, and the writer studied the bird at length both with and without glasses. It fed quietly, probing the wet sand along the edges, and in the gully itself, burying the very long bill completely to the base of the head, and once or twice actually submerging the head itself. We finally flushed the bird purposely, and as it rose, it uttered a note surprisingly like the yelp of a Black Skimmer (*Rynchops nigra*). After flying quite a distance down the beach, the bird circled, and returned to the gully.

Knowing that the bird was unseasonable, I examined the winter range in several ornithological works. I find that this is the most northerly record for the Atlantic coast during the winter. The bird seemed to be in perfect condition, and was in fine plumage. The up-curve of the bill was very distinct.—ALEXANDER SPRUNT, JR., *92 South Battery, Charleston, S. C.*

Winter Notes from South Florida.—On January 26 while at one of the many lakes of south-central Florida a small nesting colony of Florida Cormorants (*Phalacrocorax dilophus floridanus*) was visited. There were about fifteen nests, in low, stunted Cypress trees, which grew in from one to two feet of water. At least one of these nests contained young for as an old bird hurtled off at our near approach a small young one was swept off the crude platform of sticks down into the water and before we came up to it a fish of considerable size seized it and made off. Several of the old birds remained on the nests during our stay of about ten minutes, until a gun was fired.

At the same place two well grown young Anhingas (*Anhinga anhinga*) were discovered well up in the top of one of the small Cypress trees. These birds were out of the nest, perched in the very top of the tree, which carried no nest but was close to others bearing nests. While observing these two birds I was surprised to see one of them fly off, not having thought them fledged sufficiently to sustain flight. The remaining bird was shot and found to be still covered with down almost throughout and the flight feathers far from fully developed. I have usually taken fresh eggs of both these species of birds during the last week in March; those of the Anhinga farther south in the state; those of the Cormorant along the west Peninsula as well as here at Punta Gorda. The birds above mentioned must have had eggs early in January and so great a difference in time of nesting seems worth recording.

Purple Martins (*Progne subis subis*) were first seen here this year (1929) on January 31. Other years, including and since 1921, first arrivals of this bird vary from January 20 to early February.

A perfectly fresh egg of the Turkey Vulture (*Cathartes aura septentrionalis*) was found February 12, 1929, near Punta Gorda, under conditions indicating that the set was yet incomplete.

A nest of the Florida Barred Owl (*Syrnium varium alleni*) was visited January 15, in Sarasota County, in a low hammock. The nesting site was the top of a broken off Cabbage Palmetto, the entire leaf-crown being gone. Nothing but a bare, straight bole remained, with the bird fully exposed on top of this shaft. The depressed cavity was but a few inches deep, and contained two eggs which were perhaps one-fourth incubated.

On February 25, 1927 a nest of this Owl was found in the same general locality and in an identical situation.

This nest contained two young birds but a very few days old.

This may be a typical site for these birds' nesting hereabouts.—C. J. Pennock, *Kennett Square, Pa.*, and *Punta Gorda, Fla.*

Notes from Madison, Wisconsin. *Chen hyperboreus hyperboreus.* Snow Goose.—This species seldom stops in the county during migration so definite records are uncommon. I found a straggler on the shore of Lake Kegonsa, May 5, 1928. The following day, Mr. John Main collected it and kindly presented it to me. The bird was a male, weighed 2109 grams, and was normal in every respect. The skin is in my collection.

Pelidna alpina sakhalina. Red-backed Sandpiper.—A common migrant in spring, but there are few fall records. A pair was taken at Lake Kegonsa November 13, 1927.

Cryptoglaux acadica acadica. Saw-whet Owl.—Rare. A male was taken in a clump of cedars November 19, 1927.

Sturnus vulgaris. Starling.—Additional occurrences for 1928 are as follows: April 8, a pair seen at Pheasant Branch; May 5, north shore of Lake Kegonsa, one seen and the badly decomposed body of another was found on the beach; Nov. 25, one seen at College Hills.—A. W. Schorger, *2021 Kendall Ave., Madison, Wisconsin.*

Some Uruguay Records.—On the recent Captain Marshall Field Brazilian Expedition of Field Museum of Natural History, Chicago, I secured in Uruguay the following birds:

Limnoctites rectirostris GOULD.—Two females. Dept. Rocha: 15 miles north of San Vicente de Castillos. November 9 and 12, 1926. Taken in reeds in small swamps. This is the first record of this species since its discovery by Darwin in 1832.

Limnornis curvirostris GOULD.—Juvenile male. Dept. San Jose: Arazati, on coast south of Ecilda. January 10, 1927. This appears to be the second record of this bird from Uruguay since it was taken there by Darwin. It would seem from this juvenile specimen that the birds had bred there.

The following are reported from Uruguay for the first time:

Knipolegus lophotes BOIE.—Male and female. Dept. Treinte y Tres: Quebrada de los Cuervos, 45 kilometers north of the town of Treinte y Tres. December 9 and 10, 1926.

Phylloscartes v. ventralis TEMMINCK.—Three males. Two from Dept. Treinte y Tres: Quebrada de los Cuervos, 45 kilometers north of the town Treinte y Tres. December 6, 1926. One from Dept. Soriano: Estancia Concordia, on Rio Uruguay, southwest of Dolores. January 26, 1927.

The following are all from Dept. Soriano: Estancia Concordia, on Rio Uruguay, southwest of Dolores.

Sublegatus m. modestus WIED.—One female, January 31, 1927.

Phytotoma r. rutila VIEILLOT.—One male, January 21, 1927.

Micrococcyx cinereus VIEILLOT.—One male, January 27, 1927.—COLIN CAMPBELL SANBORN, *Field Museum of Natural History, Chicago, Illinois, U. S. A.*

An Early Account of the Destruction of Birds at Niagara Falls.—To an edition of John Bartram's 'Observations on the Inhabitants, Soil, etc., in his Travels from Pennsylvania to Onondaga, etc.' (London, 1751) there is added a curious account of the cataract of Niagara by Peter Kalm, a Swedish "Gentleman who travelled there" and on p. 807 occurs the following:—"Several of the French gentlemen told me, that when birds come flying into this fog or smoak of the fall, they fall down and perish in the water; either because their wings are become wet, or that the noise of the fall astonishes them, and they know not were to go in the Dark; but others were of opinion, that seldom or never any bird perished there in that manner; because, as they all agreed, among the abundance of birds found dead below the fall, there are no other sorts than such as live and swim frequently in the water; as Swans, Geese, Ducks, Water-hens, Teal, and the like. And very often great flocks of them are seen going to destruction in this manner: they swim in the river above the fall, and so are carried down lower and lower by the water, and as water-fowl commonly take great delight in being carry'd with the stream, so here they indulge themselves in enjoying this pleasure so long, till the swiftness of the water

becomes so great, that 'tis no longer possible for them to rise, but they are driven down the precipice, and perish. They are observ'd when they draw nigh the fall, to endeavor with all their might, to take wing and leave the water, but they cannot. In the months of September and October, such abundant quantities of dead water-fowl are found every morning below the Fall, on the shore, that the garrison of the fort for a long time lived chiefly upon them. Besides the fowl, they find also several sorts of dead fish, also deer, bears, and other animals which have tried to cross the water above the fall; the larger animals are generally found broken to pieces. * *

"I was told at Oswego, that in October, or thereabouts, such plenty of feathers are to be found here below the Fall, that a man in a days time can gather enough of them for several beds, which feathers they said came off the birds kill'd at the Fall. I ask'd the French, if this was true? They told me that they had never seen any such thing; but that if the feathers were pick'd off the dead birds, there might be such a quantity."—JOHN C. PHILLIPS, *Wenham, Mass.*

RECENT LITERATURE

Arrigoni Degli Oddi's 'Italian Ornithology.'—Italy has been generally charged with a lack of interest in bird study and bird protection, and pointed out as a country where song birds were regarded mainly as food and where bird netting and bird killing at any season were legitimate occupations. In 1923 however a national game law was passed and in 1926 an important report on bird protection appeared under the authorship of Count E. Arrigoni Degli Oddi and serious effort has since been made to create a proper regard for wild bird conservation.

And now appears an exhaustive treatise[1] by the same author, the leading Italian ornithologist, on the birds of Italy, which will go far toward developing interest in the bird life of the country. This notable work of over 1200 pages measures fully up to its title, 'Ornitologia Italiana,' and is as up to date and comprehensive an "Ornithology" as exists for any of the other European countries.

The main text treats of no less than 518 species and subspecies which have been recorded within the limits of Italy. The latest scientific nomenclature is used and vernacular names in Italian, French, German and English are provided for each species, while for the more familiar birds a large number of local names is added. There is a detailed description of each species, an outline of its breeding area, comparisons with related forms, and paragraphs on habitat, song, nidification and food. There are also diagnoses of genera and families with some general information about the birds composing them.

An excellent bibliography of nearly 1000 titles covering articles and books on Italian ornithology is appended, as well as general accounts of the structure of birds, migration, song, eggs, nidification and taxonomy. There is also a list of species erroneously attributed to Italy, a systematic list of the birds of Italy, a table of migration dates, etc.

Upwards of 500 text figures illustrate heads, feet and other details while 36 colored plates depict most of the Italian species. While the latter will serve for purposes of identification they are unfortunately rather crude in execution and evidently Italy has yet to produce a Fuertes or a Thorburn.

The author is to be congratulated upon producing one of the most notable of recent "ornithologies" which will serve as a work of reference to bird students throughout the world and should have a profound influence in developing a broader interest in bird study in Italy.—W. S.

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[1] Dott. Ettore Arrigoni Degli Oddi. Ornitologia Italiana, con 586 figure intercalate nel testo e 36 tavole colorate

"I slept and dreamed the life was beauty
I woke and see the life is duty."

Ulrico Hoepli editore libraio della real casa. Milano. 1929. pp. i–cli+1–1046, pll. I–XXXVI. Price L. 180.

Skinner's Guide to the Winter Birds of the North Carolina Sandhills.—Heretofore we seem to have concentrated most of our attention on the summer birds of the regions of which we write, doubtless because they constitute the breeding species and it is upon breeding areas that all zoogeographical work must be based. Then too the nesting season covers the most interesting cycles of the bird's life history.

Now however we are beginning to learn from bird banding that certain if not all birds have as definite a winter home as a summer range and it is quite fitting that works on the winter birds of definite areas should appear. Among the hosts of northern people who now go south for the winter, there must be many bird lovers, and books on the winter bird life of the regions that they visit will be most welcome.

The first work to fill such a need is the attractive volume by Milton P. Skinner on the 'Winter Birds of the North Carolina Sandhills.'[1] The author's plan is admirable. Under each species we have field identification marks, a concise description, and a paragraph on general distribution followed by a sketch of the habits of the species based mainly upon personal observation and full of interesting details.

The illustrations consist of characteristic photographs of scenes in the North Carolina sandhills and twelve colored plates from paintings by E. J. Sawyer, in his happy style of grouping a number of species together according to habitat. Mr. Sawyer's ability to get into his minute figures all of the characteristics of the species is well known and these plates are fully up to his high standard. A most useful plate, of a different type, consists of the heads of the Sparrows in winter plumage and there is also a color chart.

The book is dedicated to the late Dr. John Warren Achorn by a memorial committee of his friends. Dr. Achorn, a retired Boston physician, spent many winters in the sandhills and had long contemplated such a work as has now been produced and his friends securing the services of Mr. Skinner have most successfully carried out his idea.

Two chapters by Dr. Achorn himself have been added to the main text, one being a general sketch of the bird life of the sandhills and the other explaining the game of "bird golf" which Dr. Achorn devised, based upon competitive daily lists.

The little volume is an important addition to ornithological literature and a credit to all connected with its preparation.—W. S.

Napier's 'On the Barrier Reef.'—This popular account[2] of the great

[1] A Guide to the Winter Birds of the North Carolina Sandhills. By Milton P. Skinner with chapters by Dr. John Warren Achorn. Illustrated in color by Edmund J. Sawyer. Albany, N. Y. 1928. [Selling Agency: The Science Press Distributing Company, Grand Central Terminal, New York, N. Y.] pp. i–xiv+ 1–301, pll. 1–13, full page figs. 1–30. Price $4.00.

[2] On the Barrier Reef. Notes from a No-ologist's Pocket-Book. S. Elliott Napier. Australia; Angus & Robertson Limited. 89 Castlereagh Street Sydney. 1928. pp. 1-173.

Barrier Reef of Australia is most interesting reading. There is a chapter on the history of the reef, which by the way covers some 80,000 square miles and is about 1500 miles in length, some account of its explorers, of the author's cruise about its islands and much about the marvels of the oceanic life that abounds there—corals, crabs, fish, turtles, etc.

To the ornithologist three chapters have an especial appeal although birds figure in many other parts of the volume. One of these treats of the Mutton Bird, or Wedge-tailed Shearwater, which digs its nests in the crumbly soil of the islands, arriving at night in swarms from the ocean, and departing at dawn. The vocal powers of this bird according to the author exceed those of any beast or bird that he has ever heard. "The Lyre-bird" he says "is regarded as our champion mimic but he can imitate only what he hears. The Mutton Bird on the other hand can mimic anything whatever whether he has heard it or not and does it for eight hours on end without a pause." The long burrows which the birds construct and the little paths down which they travel to the sea are interestingly described. Another chapter considers the Noddy Terns and Gannets and a third the Herons, Gulls and Terns which nest in large colonies on the reef islands.

Even though the author styles himself an "No-ologist" he presents much interesting information about the birds and other animals of which he writes while his keen sense of humor makes his accounts most attractive. This is a nature book well worth having.—W. S.

Astley's 'From a Bird Lover's Diary.'—Here is another charming description of English bird life.[1] The chapters were originally published in 'Parents' Review' and have now been put in book form with some slight revision but the author has been careful "not to destroy the atmosphere of personal observation which is the only thing about bird watching that matters."

There are chapters on the twelve months of the year with a typical bird for each as the central theme. The Golden-crested Wren for January, the Redstart for June, the Woodcock for October, etc. Other chapters treat of bird life of a northern lake, of a northern woodland, of a northern mountain; of flight, migration, song and nest habits, while many delightful photographs of rural England serve as illustrations.

Mr. Astley has been a life long bird watcher and all the observations here set forth are matters of personal experience. For him who would gain a clear picture of British bird life such a work as this, with its intimate studies, seems to us better than the systematic text book. To the host of "bird watchers" in America it should have a strong appeal.—W. S.

Snyder on the Summer Birds of Lakes Nipigon and Abitibi, Ontario.—The staff of the Royal Ontario Museum of Zoology has been en-

[1] From a Bird-Lover's Diary. By Arthur Astley. London: The Sheldon Press, Northumberland Avenue, W. C. 2. New York and Toronto: The Macmillan Company. pp. i–ix + 1–306.

gaged during the summers of 1923–1925 in making a faunal survey of these two northern lakes and their vicinity and the results have now been published in separates[1] reprinted from the 'Transactions of the Royal Canadian Institute' and 'University of Toronto Studies.' Mr. L. L. Snyder is responsible for the bird work. A well annotated list of the Nipigon birds includes 99 species while that for Abitibi numbers 102. The two lakes are some 400 miles apart but the faunae are quite similar and we find 86 of the listed species common to both. Four species are, however, represented by different subspecies according to Mr. Snyder's identifications; thus *Melospiza m. juddi*, *Agelaius p. fortis*, *Seiurus n. notabilis*, and *Troglodytes a. parkmanni* are recorded from Nipigon while they are replaced by the eastern forms at Abitibi. Mr. Snyder's work is apparently very carefully done and all specimens obtained are listed.—W. S.

Devincenzi's 'Birds of Uruguay.'—The third instalment of this valuable work[2] covers the Cranes, Herons, Screamers, Flamingos and Ducks. The same high standard of the earlier parts is fully maintained.—W. S.

Schaanning on 'Birds from the Siberian Arctic Ocean.'—This is a report[3] on a small collection of birds brought back by the "Maud" Expedition during 1919 and 1925, mainly between the New Siberian Islands, Jeanette and Wrangell Islands. Nineteen species are represented. Among these is a series of eleven Rosy Gulls, and a Steller's Eider. In an appendix is the diary of Dr. H. U. Sverdrup giving the dates and incidents connected with the birds collected and also mention of other species observed. Among the latter are a Snowy Owl, Brent Goose and "Snow Goose" the last being identified by Dr. Schaanning as "*Anser caerulescens*" though his reason is not apparent and it would seem more likely to have been *Chen hyperboreus*.—W. S.

Horsfall's Bird Paintings.—'Nature Magazine' has published under a separate cover[4] all of the colored plates from paintings by Bruce Horsfall that have appeared in its pages up to October 1928. They comprise 108 of birds, 48 of mammals and 6 of insects. With the exception of the full page plate of the Bald Eagle the pictures are arranged six to

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[1] Contributions of the Royal Ontario Museum of Zoology No. 1. A Faunal Survey of the Lake Nipigon Region, Ontario. By J. R. Dymond, L. L. Snyder, and E. B. S. Logier. pp. 233–291. 1928.

Ibid. No. 2. A Faunal Survey of the Lake Abitibi Region, Ontario. By the Staff of the Royal Ontario Museum of Zoology. pp. 1–46. 1928.

[2] Aves del Uruguay. By Garibaldi J. Devincenzi. Anales Mus. Hist. Nat. de Montevideo. Ser. II, Tom. II, Entrega IV. 1928, pp. 339–407.

[3] Birds from the North-eastern Siberian Arctic Ocean. By H. Tho. L. Schaanning with an Appendix by H. U. Sverdrup. The Norwegian North Polar Expedition with the "Maud" 1918–1925, Scientific Results, Vol. V, No. 6. pp. 1–16. 1928.

[4] Bird and Animal Paintings. By R. Bruce Horsfall from Nature Magazine, Washington, D. C.

the page, each being about three by four inches. This publication will prove of much use to teachers and children who desire colored pictures in connection with their studies. On the back of each picture is a short text describing the habits, etc. of the bird or mammal, by Carra E. Horsfall. The pictures may thus be cut apart without losing the descriptive matter. —W. S.

Dayton's 'Bird Rhymes.'—This little book[1] deals with the songs and habits of our familiar birds and the aim of the writer is to give a personality to the birds that will make more people interested in them and add a few more to the host of bird protectors.

In his rhymes he shows an intimate knowledge of his feathered friends and their habits, and his pages will doubtless interest the boys and girls to whom he especially appeals. While his writings are, as a rule, rhymes, they are hardly verse, and the author takes many liberties with his meters so that it is not always easy to make them come out right.—W. S.

Chapman on the Nesting Habits of Oropendola.—Dr. F. M. Chapman has spent several months for the past three winters at Barro Colorado Island in the Canal Zone where he has built himself a sort of house in the tree tops, near the laboratory and spends his time in an intimate study of tropical wild life. Leaving the more strenuous investigation of the Andean avifauna which occupied many previous years he has concentrated his attention at Barro Colorado, on an intensive study of the nesting habits of that interesting Icterine bird *Zarhynchus wagleri*, or Oropendola, several colonies of which occupy large trees on the island. The tree in which the colony described in his paper[2] was located stood close to the laboratory and seated in a camp chair, under his house, with a twenty-four power binocular mounted on a tripod, Dr. Chapman was able to study the birds at about 80 feet distant as they went about their business of life totally undisturbed by his presence.

Few tropical birds have been intensively studied as ornithologists have hitherto been too busy collecting specimens, and consequently Dr. Chapman with an almost untouched field before him has made a contribution of especial value to ornithological literature, in the paper which he has just published and in which the results of his studies are set forth.

He finds that the Oropendola although a permanent resident in the tropics is non-resident and migratory in the immediate vicinity of Barro Colorado, departing after the nesting season is over, returning with remarkable regularity and beginning to nest about January 8. The females in each colony outnumber the males about three to one and the species is

[1] Bird Rhymes and Field Songs. By Bert Dayton. The Palisade Press, 125 Church Street, New York City. pp. 1–47. Price 35 cents.

[2] The Nesting Habits of Wagler's Oropendola (Zarhynchus wagleri) on Barro Colorado Island. By Frank M. Chapman. Bull. Amer Mus. Nat. Hist. Vol. LVIII, Art. III, pp. 123–166. December 31, 1928.

evidently not monogamous. A male seems to mate with several females but with only one at a time, the association covering only the period of fertilization of the eggs, and he takes no part in selecting the nest site, constructing the nest, incubation or care of the young. The males in each colony however are important as watchmen, warning the females of the approach of danger.

The method of constructing the long bag-like nests which hang conspicuously from the terminal twigs of the branches is described in detail as well as the habits of the birds during this period.

The Oropendolas were found to be parasitized by two other birds, the Cowbird-like *Cassidix* which lays its eggs in the Oropendolas' nests and a Tyrant Flycatcher *Legatus* which harries them until it gains possession of a nest for its own use.

Enemies of the birds were found to be a Hawk and an Owl (*Pulsatrix*), the latter making holes in the bottom of the nest through which the eggs or young are evidently reached. This fact seems to argue against the theory that nests as conspicuous as these are really safe from enemies by virtue of being suspended from the tips of slender branches.

Dr. Chapman's paper is full of interest and is a good illustration of what may be accomplished at a tropical biological station such as Barro Colorado. We trust that he will extend his studies to other species of the jungle.—W. S.

Van Tyne on the Habits of the Toucan.—Another recent paper based on Barro Colorado is Dr. Josselyn Van Tyne's 'Life History of the Toucan *Ramphastos brevicarinatus*.'[1] He selected a later period than Dr. Chapman for his visits to the Isthmus remaining one year to May and twice to August which enabled him to carry his studies through the breeding season.

He finds that this bird has only one molt per year, its flight is simple and direct but very weak, its call is a frog-like croak, and it roosts in hollow trees, folding the tail up against the back. Its food is mainly fruit and the nest cavity is often floored with ejected fruit pits as large as marbles. Like Oropendola it nests in the dry season, but unlike it both birds of a pair share the duties of incubation and the care of the young. The young are naked at hatching and very helpless while the eyes do not open for three weeks. They have the remarkably well developed heel pad which has been described, though rather poorly, by previous authors, and which serves to help support the young bird on the nest floor during its nest-life.

Dr. Van Tyne discusses at length the possible use of the remarkable Toucan bill and the many guesses that have been advanced to explain it. He concludes from careful observations that the bill is not a special cor-

[1] The Life History of the Toucan, *Ramphastos brevicarinatus*. By Josselyn Van Tyne. Univ. of Michigan. Mus. of Zool., Misc. Publ. No. 19, pp. 1-43. January 17, 1929.

relation of structure to function, but is rather the result of an orthogenic evolution leading toward increased size of bill.

This paper, like Dr. Chapman's is of unusual interest and value.—W. S.

Swarth on a New Bird Family for the Galapagos Islands.[1]—Anyone at all familiar with the land birds of the Galapagos Islands would probably be able to forecast Mr. Swarth's conclusions as soon as he read the title of his paper and we confess that we did so when we saw the program of the recent A. O. U. meeting of which it formed a part.

Robert Ridgway and others have shown the necessity, if we should follow a strictly logical procedure, of linking up all of the several dozen so called "finches" which inhabit this group of islands under one generic and probably one specific name, so completely do their characters overlap. Mr. Swarth has gone a step further and has linked up the so called "Galapagos creepers" in the same series, making an almost unbroken line from birds with the great Grosbeak-like bills to those with the slender beaks of Warblers. The various forms showing but little variation in plumage.

None of the authors however have felt that they can carry their reduction of genera and species to such an extreme, as nomenclature would then fail to function and we should have to invent some other sort of terms to indicate which group of these perplexing birds we were talking about. Mr. Swarth, therefore, for convenience recognizes four genera, *Geospiza*, *Cactospiza*, *Camarhynchus* and *Certhidea* and if these are proven to represent a continuous series then it is obviously ridiculous to refer the first three to the Fringillidae and the last to the Coerebidae or Mniotiltidae as has usually been done. Indeed Mr. Swarth sees no obvious evidence that the series as a whole can be definitely derived from any of the families mentioned and proposes to let them stand as a distinct family Geospizidae, quoting the case of the Drepanididae of the Hawaiian Islands as a parallel case, some of the heavy-billed forms of this group having also been referred to the Fringillidae.

The interrelations of the Galapagos birds are, however, more complex than those of the Hawaiian species since they have not become so completely differentiated, doubtless due to a shorter period of isolation.

While we agree with most of Mr. Swarth's conclusions we cannot find any very distinctive characters upon which to base a separate family in the diagnosis which he presents but it must be admitted that several of the generally recognized Passerine families are not much better characterized.

Three new forms are described in Mr. Swarth's paper which serve to emphasize his conclusions as to the relation of *Certhidea* to the other genera. *Cactospiza giffordi* (p. 32) from Indefatigable Island proves intermediate between *Cactospiza* and *Certhidea; Camarhynchus conjunctus* (p.

[1] A New Bird Family (Geospizidae) from the Galapagos Islands. By Harry S. Swarth. Proc. Calif. Acad. Sciences. Fourth Series, Vol. XVIII, No. 2, pp. 29–43. January 29, 1919.

33) and *C. aureus* (p. 34) from Charles and Chatham Islands, are intermediate between *Camarhynchus* and *Certhidea*. One other specimen is so perplexing that Mr. Swarth admits that he cannot decide whether it is referable to *Certhidea ridgwayi* or *Camarhynchus conjunctus!*

Regardless of whether we adopt the author's views on the comparatively unimportant point as to whether these Galapagos birds shall be regarded as forming a separate family or not, Mr. Swarth has made a most valuable contribution to the literature of Galapagos ornithology.—W. S.

Slevin on the Nesting Habits of the Golden Eagle.—A short time ago in a review of Seton Gordon's book on the Golden Eagle of Scotland we expressed regret at the lack of serious studies of the bird in America. The paper[1] before us presents much important data on the character of the nests and nesting sites but unfortunately mainly from the standpoint of the egg collector, and the detailed observations on old and young such as Gordon presents are lacking. (See, however pp. 161–169 *antea*).

Mr. Slevin's studies cover seven pairs of these noble birds which nested in Santa Clara and San Benito Counties, California, from 1916 to 1922, from which 21 sets of eggs were obtained. A number of excellent photographs of nests and sites are presented.—W. S.

Recent Papers by Hartert.—Dr. Hartert completes his catalogue of the types[2] of birds in the Tring Museum,[2] begun ten years ago, with a ninth instalment covering the remainder of the additional and overlooked types. This brings the total to 2005 and includes two descriptions of new forms *Prosthemadera novaeseelandiæ chathamensis* (p. 204), Chatham Island, and *Zosterops virens somereni* (p. 207), Mt. Kenya.

Dr. Hartert has also issued[3] the first instalment of a list of Gregory M. Mathews' types which with the rest of his collection are now in the Tring Museum. This catalogue is of the greatest importance as so many of Mathews' descriptions are exceedingly brief and often without indication of a type. We have also Dr. Hartert's opinion as to the validity of the forms described of which 39 out of 53, many of them repudiated by the author himself, are here relegated to synonymy. Dr. Hartert takes this opportunity to study the Crow problem and supports Mathews in the recognition of three species in Australia, *coronoides*, *cecilae* and *bennetti* but he admits none of Mathews' subspecies and *C. cecilae* is regarded as a member of the wide ranging *macrorhynchus* group while the others stand alone.

If Dr. Hartert could ascertain and publish the identity of the individuals after whom a number of Mr. Mathews' birds are named he would confer a

[1] A Contribution to Our Knowledge of the Nesting Habits of the Golden Eagle. By Joseph R. Slevin. Proc. California Academy of Sciences. XVIII, No. 3, pp. 45–71. January 29, 1929.

[2] Novitates Zoologicae, XXXIV, pp. 189–230. July 1928.

[3] Ibid, pp. 337–371. July 1928.

great favor upon those interested in the historic side of ornithology as they are seldom mentioned in connection with the original descriptions and several cases are very ambiguous.

A paper[1] of quite different type is another of the author's interesting accounts of his travels in northern Africa, 'A Rush through Tunisia, Algeria and Morocco,' with many illustrations and an annotated list of species observed. *Apus melba archeri* (p. 363) from Hargusa; *A. m. bakeri* Ceylon (p. 363); and *A. affinis bannermani* (p. 365) San Thome Island are described as new. In conjunction with Lord Rothschild[2] Dr. Hartert describes *Ailuroedus buccoides molestus* from Haidana, New Guinea.—W. S.

Farsky on the Food of European Birds.—The results of a very considerable personal research are presented in this paper,[3] which reports on 2,064 stomach analyses of 23 species of European Hawks, Owls and Crows. Those represented by the largest number of stomachs are *Corvus cornix* 468, *Corvus frugilegus* 400, *Asio otus* 218, and *Buteo vulgaris* 214. The results are presented in narrative form, using the numerical system. A summary points out the difficulty of definitely fixing the economic status of species which depend on their relation to human culture, a diversified and varying thing. There is a long bibliography which is digested in an early chapter and there are reproductions of six photographs of interesting stomach contents.—W. L. M.

Bond on West Indian Birds.—Mr. James Bond during 1927 and 1928 made two collecting trips to the West Indies in the interests of the Academy of Natural Sciences of Philadelphia, the first to the islands of Dominica, St. Lucia, St. Vincent and Barbados; and the second to the Republic of Haiti. The results of his work are included in two papers[4] before us.

On the first trip 111 species and subspecies were encountered and specimens of most of the land birds secured, including a new race of Golden Warbler from St. Lucia (*Dendroica petechia babad*) already described in 'The Auk.' Mr. Bond presents much of interest regarding the distribution and habits of the birds together with the native names given them on the several islands.

In the introduction is a discussion of the distribution of the genera and on the effect of the introduction of the mongoose and of deforestation, on the bird life.

On his second visit he concentrated his attention entirely on Haiti visiting the closely adjacent island of Gonave. From December, 1927, to

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[1] Ibid, XXXV, pp. 42–58, January, 1929.

[2] Ibid, pp. 59, January, 1929.

[3] Farsky, Octavianus, De L'Utilite de Quelques Oiseaux de proie et Corvides, pp. 1–225, 1 folded pl., Nancy, 1928

[4] The Distribution and Habits of the Birds of the Republic of Haiti. On the Birds of Dominica, St. Lucia, St. Vincent and Barbados, B. W. I. By James Bond. Proc. Acad. Nat. Sciences of Philadelphia, LXXX, pp. 483–521. Ibid. pp. 523–545. (Published February 9, 1929).

June, 1928 he observed 152 species while notes on 12 additional species are added from the observations of others. The rediscovery of *Microsiphonorhis brewsteri* was the outstanding feature of this trip and has already been described in 'The Auk' although additional data are presented here. Mr. Bond, we think rightly, considers that the genus must be merged with *Siphonorhis*. Two specimens of the interesting Thrush, *Haplocichla swalesi*, discovered by Dr. Alexander Wetmore a few years since, were obtained. As in the other paper Mr. Bond has presented much valuable data on the habits and distribution of the species as well as the native names. The two papers constitute a very valuable contribution to our knowledge of the West Indian avifauna and we trust that a third expedition which Mr. Bond is now undertaking will add still further data on the birds of this interesting region.—W. S.

deSchauensee on a Collection of Birds from Siam.—Mr. Rodolphe deSchauensee spent the greater part of the months of March and April collecting birds in Siam for the Academy of Natural Sciences of Philadelphia. Most of his time was spent at Bangkok, Chieng Mai, 450 miles north in the Lao district and Me Klong in central Siam. About 160 species were obtained and notes[1] on the habits and relationship of the various forms are presented as well as data on all of the specimens.

An interesting and distinct race of the Broadbill, *Corydon sumatranus laoensis* (p. 555) is described from Chieng Mai.

In addition to the specimens secured by Mr. deSchauensee and his native collectors, some 28 skins were purchased in Bangkok which are included in the report.

The author is back again in northern Siam and recent communications received from him state that he has obtained a still larger collection which will undoubtedly contain much of interest and add still further to our knowledge of the birds of this country.—W. S.

Taverner on the Birds of Belvedere, Alberta.—This important list[2] of 205 species is based upon field work in the vicinity of Belvedere from May to October 1926 by a party consisting of P. A. Taverner, C. G. Harrold and H. M. Laing. The locality is already famous through the work of Mr. A. D. Henderson and those who have enjoyed the hospitality of his home and he and his friends have added greatly to our knowledge of the breeding habits of many of the northern birds. Notes by Rowan, Harlow and Rauch, who were engaged in field work simultaneously with Mr. Taverner's party, have been incorporated in the report as well as information furnished by Mr. Henderson.

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[1] A Collection of Birds from Siam. By Rodolphe M. deSchauensee. Proc. Acad. Nat. Sciences of Philadelphia, LXXX, pp. 553–580. (Published, February 21, 1929.)

[2] Ornithological Investigations near Belvedere, Alberta. By P. A. Taverner. Annual Report of the Canadian National Museum for 1926. Ottawa, 1928. pp. 84–104.

Mr. Taverner has made a valuable contribution to the ornithology of this part of Alberta. He continues to adhere to his practice of using only specific names, but, inasmuch as he frequently determines the subspecies in the body of the text, we cannot see why it should not be given in the heading. It seems, moreover, to savour of ultra conservatism to call the Osprey *Pandion haliaetus* as there is no more danger of the individuals seen being the European subspecies than of the Brown Creepers being the European *C. brachydactyla* and yet, in the latter case, he does not hestitate to use the specific name *familiaris*. While we respect Mr. Taverner's desire to take nothing for granted we do not feel that he gains anything by his method, nor that it can be made thoroughly consistant.—W. S.

Annotationes Ornithologiae Orientalis.—This publication[1] published and edited by Toku T. Momiyama contains many papers of importance on Japanese birds nearly all of which are by himself.

No. 3 contains: A Catalogue of Bird Skins from southern Sakhalin (six new subspecies); A list of the birds from Prefecture Miyagi by S. Kumagai (one new form); notes on birds of the same region with description of a new Woodpecker by S. Kumagai; Descriptions of three new genera and one new species from eastern Asia and a list of birds from Formosa. The first two articles and all of the descriptions are in English. The new genera are *Micreophona* (used on pages 244 and 284 by Kumagai and formally proposed on p. 319 by Momiyama) for *Eophona migratoria, Cristemberiza* (p. 319) for *Emberiza elegans* and *Sieboldornis* (p. 319) for *Bombycilla japonica.*

No. 4 contains: A continuation of the Formosa list; On Discriminative Points in Field Observation of some allied Birds in Japan; The Birds of Province Inaba, western Hondo (in conjunction with Y. Ikoma) and Twelve Forms of Japanese birds. There is a colored plate of *Cyanoptila caeluleiceps* Mom. and several uncolored plates.—W. S.

Neunzig's 'Zum Brutparasitismus der Viduinen.'—In the 'Journal für Ornithologie' for January, 1929, Rudolf Neunzig has produced a paper purporting to be a summary of what is known concerning the parasitic habit in the African Weaverbirds. The chief characteristics of this paper are lack of knowledge, lack of thought, and lack of judgment. The present reviewer has been deeply interested in the parasitic birds of the African continent for some years and, having had considerable first hand experience with them in life, feels that so obvious and misleading a piece of romancing should not be passed by without comment. As far as is definitely known only three Weavers are proven to be parasitic in their breeding habits,—*Vidua macroura, Tetraenura regia,* and *Anomalospiza imberbis,* but this does not deter Herr Neunzig from forming definite conclusions not only as to the parasitic habit, but even as to the victims

[1] Annotationes Ornithologiae Orientalis Vol. I, No. 3, December 21, 1928 pp. 201–388. No. 4, December 31, 1928, pp. 339–456.

of the additional species *Linura fischeri*, *Vidua hypocherina*, *Steganura paradisea*, and *Hypochera chalybeata*. It must be admitted that it is quite likely that the first three of these will eventually be found to be parasitic, but there are no data available at present to prove it. Neunzig himself admits this, but has the assurance to pick out deliberately species of Weavers whose juvenal plumages present some similarity to those of the supposed parasites and definitely call them the victims of the latter. Not content with this piece of pure fiction he at once proceeds to dilate on the remarkable mimicry existing between parasite and host-species! He appears to feel that each parasite restricts its attentions to a single species of victim. Yet *Vidua macroura* (*V. serena* of Neunzig's paper) is definitely known to parasitize at least ten species of Weavers. The whole paper is so full of similar notions that it seems unnecessary to elaborate further, but the following example may suffice to convey the apalling lack of familiarity of the author with his subject. Neunzig has apparently had no field experience in Africa and may therefore be excused if he makes a few mistakes with regard to habits, but there is no pardon for his ignorance of the literature. The classification that he follows is the most antiquated and least natural of all the schemes proposed within the last fifty years. He actually goes back to Shelley's arrangement which is admitted by all students of African birds to be far worse than that used by Reichenow. He completely ignores the more recent papers of Chapin and Suschkin, and his phylogenetic arguments are apparently the result of a desire to bolster up a pet theory. He argues that if *Vidua* and *Hypochera* agree with the Estrildinae in having gape wattles when young and in laying pure white eggs, this is not a sign of relationship, but rather of mimicry of hosts! To be really consistent one ought to change the plumages of the metallic Cuckoos (*Lampromorpha* and *Chrysococcyx*) to yellow with black heads because of the birds they victimize. Or else claim that the nonparasitic Cowbirds belong to the Icteridae and the parasitic ones to the Cuculidae!—HERBERT FRIEDMANN.

Bangs, Outram.[1]—A New Vanga from Southern Madagascar (Proc. N. E. Zool. Club, X, p. 107. December 31, 1928).—*V. curvirostris celera.*

Bangs, O. and Peters, J. L.—A Collection of Birds from Oaxaca (Bull. Mus. Comp. Zool., LXVIII, No. 8, pp. 385–404.)—An annotated list; *Colinus virginianus thayeri* (p. 386) Chivela; *Xiphorhynchus flavigaster tardus* (p. 393) Chihuahua; *Sittasomus griseicapillus gracilieus* (p. 392) Chichen Itza, are described as new.

Bédé, P.—Notes d' Ornithologie (Jardin Zoologique de Sfax, Fasc. I. 1928.)—Popular accounts of many Tunisian birds. [in French]

[1] So many short papers have appeared recently that lack of space compels us to notice them in this brief manner.

Brooks, W. S.—Record of a Lapwing from Aroostook Co., Maine. (Bull. Boston Soc. Nat. Hist., No. 49, October, 1928.)—December 21, 1927, specimen in Boston Society of Natural History.

Chapman, F. M.—Descriptions of New Birds from Eastern Ecuador and Eastern Peru. (Amer. Mus. Novitates, No. 332, October 31, 1928.)—*Crypturus macconnelli fumosus* (p. 1) Junction Rio Napo and Curaray River; *Otus guatemalae napensis* (p. 5) below San Jose de Sumaco, Ecuador; *Neomorphus napensis* (p. 5) Rio Napo and Curaray; *Eubucco richardsoni nigriceps* (p. 7) Pebas Peru; *Nonnula ruficapilla rufipectus* (p. 8) Junction of Rio Napo and Amazon; *Pithys albifrons brevibarba* (p. 8) Lower Suno; *Rhegmatorhina brunneiceps* (p. 9) Moyobamba, Peru; *Anachilus* (gen. nov.) *A. ucayalae* (p. 11) Upper Ucayali, Peru.

Chapman, F. M.—Mutation in Capito auratus (Amer. Mus. Novotates., No. 335, November 16, 1928.)—Five new races described and twelve in all, recognized. This species according to Dr. Chapman presents variations which are individual or mutational rather than geographic or climatic and their perpetuation as racial characters depends upon the degree of isolation which is provided.

Delacour, J.—Les Oiseaux des Isles Hawaii (Rev. d'Hist. Nat. Appliquee, IX, Nos. 6–8, June–August, 1928.)—An interesting review of the avifauna of the Hawaiian Islands. [in French]

Dickey, Donald R. and vanRossem, A. J.—A New Subspecies of Myioborus and a New Species of Chlorospingus from El Salvador. (Proc. Biol. Soc. Wash., 41, pp. 189–190, October 15, 1928.)—*M. miniatus connectens* and *Chlorospingus schistaceiceps.*

Friedmann, Herbert.—The South African Form of the Spotted Crake (Proc. N. E. Zool. Club, X, pp. 77–78, October 18, 1928.)—*Porzana pusilla intensa,* Moorddrift, Transvaal is described as new.

Friedmann, Herbert.—A New Sand-Grouse and a New Courser from Tanganyika Territory (Proc. N. E. Zool. Club, X, pp. 79–81, October 18, 1928.)—*Eremialictor decoratus loveridgei* (p. 79) *Rhinoptilus africanus illustris* (p. 80).

Friedmann, Herbert.—A New Cuckoo from Tanganyika Territory (Proc. N. E. Zool. Club, X, pp. 83–84, November 13, 1928.)—*Cercococcyx mantanus patulus* (p. 84).

Friedmann, Herbert.—Social Parasitism in Birds (Quarterly Revue of Biology III, No. 4, pp. 554–569, December, 1928.)—A review of the subject with extracts from the author's other papers.

Friedmann, Herbert.—The geographical variations of the Crowned Plover, *Stephanibix coronatus* (Proc. N. E. Zool. Club, X, pp. 91–97, November 13, 1928.)—*S. c. suspicax* (p. 95) and *S. c. demissus* (p. 97) from Abyssinia and British Somaliland respectively are described as new.

Friedmann, Herbert.—A New Francolin from Abyssinia. (Jour. Wash. Acad. Sci., 18, No. 14, August 19, 1928.)—*F. africanus fricki*, Arussi Plateau.

Friedmann, Herbert.—Description of a Dove and a Rail from Tanganyika Territory (Proc. N. E. Zool. Club, X, pp. 67–69.)—*Streptopelia capicola anceps* (p. 67) and *Sarothrura elegans languens* (p. 68).

Grinnell, Joseph.—Presence and Absence of Animals. (Univ. Calif. Chronicle. October, 1928.)—A Study of the distribution of 1149 species of mammals, birds and reptiles shows that not one occurs throughout the state. A discussion on barriers follows, some are obvious and others intangible but none the less powerful. Individuals may overcome these barriers, as in the case of many birds, but the species cannot and the breeding area remains sharply delimited.

Gross, A. O.—Progress Report of the New England Ruffed Grouse Investigation Committee September 1, 1928.—Tularemia has not as yet been detected in Grouse. A table of food and measurements of adult birds is given and also data on the food of Snowy Owls and Goshawks.

International Committee on Zoological Nomenclature.—Opinions 98–104. (Smithsonian Miscellaneous Coll. 73, No. 5, September 19, 1928.)—Opinion 103 establishes the type of *Grus* Pallas 1767 as *Ardea grus* Linn. as advocated by Stone, so that the time honored generic name is preserved and the change to *Megalornis* becomes unnecessary.

Kalmbach, E. R.—The European Starling. (U. S. Dept. of Agriculture, Farmers Bulletin No. 1571.)—A revised report on the status of the bird. Its value as a destroyer of terrestrial insect pests is maintained but it is admitted to be a growing menace owing to its rapid increase, and methods are indicated for local control. We fear that the quasi-protection so far given it has already placed it beyond control and the reduction in the number of native birds coincident with the rapid increase of the Starling is already noticeable in many quarters.

Lincoln, F. C.—Bird Banding in America. (Smithsonian Report for 1927, pp. 331–354. pll. 1–9. 1928.)—An interesting summary of the results of this line of work in America.

Lincoln, F. C.—Forster's Tern in the District of Columbia. (Proc. Biol. Soc. Wash., 41, p. 209. December 18, 1928.)—Previously very rare, only two records prior to September–October, 1928, when it became fairly common on the Potomac.

Linsdale, Jean M.—Some Environmental Relations of the Birds in the Missouri River Region. (Wilson Bull., pp. 157–177. September, 1928.)—An interesting ecological study discussing habitats, effect of culture on birds and vice versa, response to seasons, relation between species and succession.

Miller, Alden H.—The Molts of the Loggerhead Shrike. (Univ. Calif. Publ. in Zool., 30, No. 13, pp. 393–417. 1928.)—A detailed study in which the point is brought out that no difference can be found between new first year and adult feathers, in these Shrikes, which would emphasize the fact that differences stated to exist between the several races are really taxonomic and not due to age.

Murphy, Robert C. and Mathews, G. M.—Birds Collected during the Whitney South Sea Expedition. V. (Amer. Mus. Novitates, No. 337. December 13, 1928.)—Five new forms of *Pomarea* and six of *Conopoderas* from the Marquesas are described and notes presented on *Pomarea nigra* and *mendozae*.

Nelson, Edward W.—Descriptions of three new subspecies of Birds from Mexico and Guatemala. (Proc. Biol. Soc. Wash., 41, pp. 153–156. October 15, 1928.)—*Aratinga holochlora brewsteri* (p. 154) and *Hesperiphona abeillii pallida* (p. 155) from Chihuahua and *H. a. cobanensis* (p. 155) from Coban, Vera Paz, Guatemala.

Peters, J. L. and Griscom, Ludlow.—A New Rail and a New Dove from Micronesia. (Proc. N. E. Zool. Club, X, pp. 99–106. December 31, 1928.)—*Tricholimnas conditicius* Apaiang, Gilbert Islands, collected by A. Garrett in 1859, and *Ptilinopus marshallianus* (p. 104) Ebon Island, Marshall Islands obtained by Rev. B. G. Snow, the same year. Both alcoholic specimens. Interesting details of Garrett's visit to the islands are supplied by Dr. Thomas Barbour.

Riley, J. H.—Description of a New Whistling Thrush from southeastern Siam. (Proc. Biol. Soc. Wash., 41, pp. 207–208. December 18, 1928.)—*Myophonus temminckii changensis*.

Robinson, H. C. and Kinnear, N. B.—Notes on the Genus Cyornis. (Novitates Zoologicae, XXXIV, pp. 231–261. July, 1928.)—A systematic review; *C. rubeculoides rogersi* (p. 233) Aracan Yomas is described as new.

Strecker, John K.—Notes on Summer Birds of the Northwestern Parishes of Louisiana. (Contrib. Baylor Univ. Mus., No. 14, pp. 3–13. July 2, 1928.)—Notes on 82 species in Caddo, Bossier and DeSoto Parishes.

Sutton, George M.—Notes on the Status of the Ruffed Grouse in Pennsylvania. (American Game, p. 75. August–September, 1928.)—Few die from disease and they rapidly rehabilitate an area in which their numbers have been reduced.

Swarth, Harry S.—Occurrence of Some Asiatic Birds in Alaska. (Proc. Calif. Acad. Sci., XVII, No. 8, pp. 247–251. July 10, 1928.)—Collected by C. G. Harrold on Nunivak Island, Alaska; *Charadrius mongolus mongolus, Pyrrhula p. cassini, Anthus spinoletta japonicus, Locustella ochotensis* and *Prunella montanella*.

Todd, W. E. Clyde.—Five New Manakins from South America. (Proc. Biol. Soc. Washington, 41, pp. 111–114. June 29, 1928.)—*Manacus manacus purissimus* (111) Para, Brazil; *Cirrhipipra filicauda subpallida* (p. 112) Las Quiguas, Venezuela; *Pipra iris eucephala* (p. 112) Rio Tapajoz, Brazil; *Schiffornis turdinus steinbachi* (p. 113) Province del Sara, Bolivia; *S. t. intercedens* (p. 113) Rio Purus, Brazil.

Wetmore, Alexander.—The Mourning Dove in Jamaica. (Proc. Biol. Soc. Wash., 41, p. 173. October 15, 1928.)—Apparently but one record.

Wetmore, Alexander.—The Clapper Rail of Hispaniola. (Proc. Biol. Soc. Wash., 41, p. 121. June 29, 1928.)—*Rallus longirostris vafer* (p. 121) new race.

Wetmore, Alexander.—Prehistoric Ornithology in North America. (Jour. Wash. Acad. Sci., 18, No. 6. March 19, 1928.)

Wetmore, Alexander.—A New Subspecies of Flycatcher from Gonave Island, Haiti. (Proc. Biol. Soc. Wash., 41, pp. 201–202. December 18, 1928.)—*Blacicus hispaniolensis tacitus* (p. 201).

Wetmore, Alexander.—A New Species of Piculet from Gonave Island, Haiti. (Proc. Biol. Soc. Wash., 41, pp. 167–168. October 15, 1928.)—*Nesoctites abbotti* (p. 167).

Wetmore, Alexander.—The Short-eared Owl of Porto Rico and Hispaniola. (Proc. Biol. Soc. Wash., pp. 165–166, 41. October 15, 1928.)—Recognizes *Asio domingensis* (Mull.) of which the Porto Rican bird is a subspecies.

Wetmore, Alexander.—Zoological Explorations in Hispaniola (Field Work of the Smithsonian Institution in 1927.)

The Ornithological Journals.

Bird-Lore. XXXI, No. 1. January–February, 1929.

Bird Haven—Its Purpose and Present Status. By Robert Ridgway. —The greater part of this number is taken up with the Christmas Census. San Diego leads with 120 species; Santa Barbara had 110; and Leon Co., Fla. 86; while Cape May, N. J., with 80, comes fourth.

In the Audubon School Department Dr. A. A. Allen has an interesting life history of the Chickadee.

The Condor. XXXI, No. 1. January–February, 1929.

Nesting of the Snowy Owl. By O. J. Murie.—A splendidly illustrated article on the habits of the bird on the tundra of the Askinuk Mts., Hooper Bay, Alaska.

The Fortunes of a pair of Bell Vireos. By Margaret M. Nice.

Fragmentary Notes on Bird Life in the Fijis. By W. J. Belcher.—The Golden Plover, introduced Indian Mynah, Golden Fruit Dove and White Owl are considered. It is rather confusing in view of the present widely recognized nomenclature to continue to include the last bird a "Barn Owl" in the genus *Strix*.

A Turkey Buzzard Roost. By Frank A. Leach.

Notes on Birds Observed in Moffat County, Colorado. By Russell W. Hendee.—An annotated list of 95 species.

A New Wood Rail from El Salvador. By Donald R. Dickey.—*Aramides vanrossemi* (p. 33) with a colored plate after a painting by Allan Brooks.

The Oölogist. XLV, Nos. 8–12. August–December, 1928.

Super-Singers. By W. E. Saunders (August).—Unmated males probably develop unusual powers of song due to increased anxiety and eagerness to mate.

Gray Kingbird Nesting in Florida. By D. J. Nicholson. (September).

Texas Canyon Wren. By A. L. Fitzpatrick (September).—Waco Texas.

Pennsylvania and New Jersey Nesting Dates for 1928. By R. F. Miller. (September.)

Nesting of the White-breasted Nuthatch in Center County, Pa. By R. F. Miller. (October.)

The Swallow-tailed Kites of Southwest Florida. By D. J. Nicholson. (November.)

The Cardinal. II, No. 5. January, 1929.

The Turkey in Pennsylvania. By Bayard H. Christy and Geo. M. Sutton.

Further Notes on the Birds of Allegheny County, Pennsylvania. By Thos. D. Burleigh.

Bird Notes from Pymatuning Swamp. By Geo. M. Sutton.

Upland Plover in Westmoreland County. By Bayard H. Christy and Rudyerd Boulton.

The Gull. 10, Nos. 8–12. August–December, 1928.

American Coot Defending its Young. By Joseph Mailliard (August).—Rushing over the surface of the water and splashing water in the direction of the intruder.

Some Random Notes on Sea Birds Along the California Coast. By Paul Bonnet (September).—A useful table of identification marks of Gulls of San Francisco Bay is added by Joseph Mailliard.

Bulletin of the Northeastern Bird-Banding Association. IV, No. 4. October, 1928.

A Bird Research Laboratory. By S. Prentiss Baldwin.

Migration Routes of the Arctic Tern. By O. L. Austin, Jr.

Notes on Banding Terns at Chatham, Mass., for 1928. By Charles B. Floyd.—5131 young and 161 adult Common Terns and 500 young and

2 adult Roseate Terns.—Presents some evidence to support his logical theory that the Arctic Terns breeding in the western Hemisphere came from north Europe by gradual stages and in their migration return there before turning south. There are only half a dozen accidental records between Massachusetts and Brazil while one bird banded in Labrador was recovered in France. The author states that the species is not distinguishable from the Common Tern in flight fifty feet away.

How Long do Purple Finches Live? By M. J. Magee.—Several have been trapped the fifth year after banding and one the sixth year. Over a thousand have been banded every year.

Partial History of a Pair of Nesting Juncos. By Wendell P. Smith.

The Age of Banded Birds. By John T. Nichols.—An interesting summary of published records showing that a Chimney Swift, Crow, Junco and Brown Thrasher have lived for eight years and certain water fowl for ten and twelve years.

Second List of Migratory Species which Return to their Former Nesting Areas. Charles B. Floyd.

Spring Molt of the Evening Grosbeak. By M. J. Magee.—Very slight molt and probably not in all individuals.

Bulletin of the Northeastern Bird Banding Association. V, No. 1, January, 1929.

The Races of Cepphus grylle. By O. L. Austin, Jr.—A new race intermediate in range between the two alleged species *grylle* and *mandtii* is proposed for which the name *arctica* Brehm is revived.

Recoveries of Black-crowned Night Herons Banded in Massachusetts. By Dr. John B. May.

A Third Season's Banding at Summerville South Carolina. By William P. Wharton.

Migration Studies of Junco and Chipping Sparrow Groups. By C. L. Whittle.

Bulletin of the Vermont Botanical and Bird Clubs. No. 13, December, 1928.

Some Observations on the Nesting Habits of the Kentucky Warbler. By H. C. Fortner.—At Knoxville, Tenn.

The Murrelet [Mimeographed Journal]. X, No. 1. January, 1929.

Afield and Afloat with Dawson. By J. M. Edson.—Experiences with the late W. Leon Dawson.

August Bird Life on Liumchin Mountains, B. C. By J. A. Munro.

Spring Food Habits of Yakima Valley Hawks. By L. K. Couch.

Dotted Canyon Wren in Yakima Co., Washington. By J. B. Hurley.

Subcutaneous Parasitism of a young Yellow Warbler by Fly larvae. By R. C. Miller.

Bulletin of the Iowa Ornithologists' Union. I, No. 1, February, 1929.

A four page quarterly with numerous short notes on Iowa birds. Dr. F. L. R. Roberts, Spirit Lake, Iowa, is Editor.

The Ibis. V, No. 1. January, 1929.

A Contribution to the Ornithology of the Coastland of British Guiana, Part II. By Charles G. Young.

The Nest and Eggs of the Eastern Asiatic Knot. By H. T. L. Schaanning.

A Note on the Earliest Appearance of the Cock in Egypt. By Percy R. Lowe.—In correction of Beebe's statement that the Cock was unknown in Egypt before 50 B. C. there is figured an ostracon from the talus slope beneath Tutankhamen's tomb bearing the unmistakable drawing of a Cock. This is supposed to date back to 1400 B. C.

Some Birds seen in the Indian Ocean and the Mediterranean. By H. G. Alexander.

Notes on the Effect of Temperature upon the Breeding Behaviour of Birds with Especial Reference to the Northern Golden Plover and the Fieldfare. By Frances Pitt.—Observations in the mountains of central Norway.

Some Observations on the Nesting of Birds in the Vicinity of Cape Town, South Africa. By Gen. R. M. Betham.

Studies in Sexual Phenomena. IV. The Display of the Lesser Superb Bird of Paradise with a further note on that of Wilson's Bird of Paradise.

On the Birds collected by Mr. H. Stevens in Northern Tonkin. By N. B. Kinnear.

Bulletin of the British Ornithologists' Club. CCCXXVII. December 4, 1928.

The Address of the Chairman, Dr. P. R. Lowe.

A revision of the races of *Sterna albifrons*. By E. C. Stuart Baker.

New forms described as follows: By G. L. Bates, *Urolais epichlora cinderella* (p. 31), Cameroons; *Thamnolaea cinnamomeiventris bambarae* (p. 32), French Sudan; *Mesopicus johnstoni sordidatus*, (p. 33) Cameroon; *Francolinus coqui spinetorum* (p. 33), Haute Volta on the Niger; by E. C. Stuart Baker, *Ardea imperialis* (p. 40) for the bird known as *A. insignis* and *Squamatornis* (p. 40) for *Rubigula squamata webberi*, although the author, contrary to the recommendation of the International Commission, does not definitely designate a type; by Col. Meinertzhagen, *Pterocles coronatus vastitus* (p. 42) Southern Palestine.

Bulletin of the British Ornithologists' Club. CCCXXVIII. December 17, 1928.

On the pecten of the bird's eye. By Arthur Thomson.

New forms proposed: By J. Delacour and N. B. Kinnear, *Gallus gallus jabouillei* (p. 49) Tonkin; by J. Delacour; *Pitta soror intermedia* (p. 49) northern Annam; *Houbaropsis bengalensis blandini* (p. 49) Cambodia; *Macropygia ruficeps engelbachi* (p. 50) Laos; by M. B. Kinnear; *Parus*

palustris congrevei (p. 50) Transylvania; by H. Whistler; *Galerida cristata lynesi* (p. 52) Gilgit.

Bulletin of the British Ornithologists' Club. CCCXXIX. January 24, 1929.

J. Delacour proposed as new *Trochalopterum erythrocephalum connectens* (p. 58) Laos. By G. M. Mathews: *Pomarea nigra tabuensis* (p. 60) Tongatabu.

British Birds. XXII, Nos. 7–9. December, 1928–February, 1929.

Field Notes from Lakeland. By R. H. Brown. (December).

Autumn Habits of Rooks. By Rev. E. Peake. (January.)

Recovery of Marked Birds. (January and February.)

Notes on the Nesting Habits of the Peregrine Falcon. By G. C. S. Ingram and H. M. Salmon. (February.)—Excellent photographs.

The Avicultural Magazine. VI, Nos. 9–12. September–December, 1928.

Besides numerous articles on cage birds there are the following:

The Call of the Wild. By J. B. Housden.—Bird studies in Texas. (September.)

A Collection of Living Birds from Central Annam. By J. Delacour. (September.)

The Regent Bird. By D. Seth Smith. (October.)—With a photograph of its bower constructed in the London Zoo.

The Blue Turacou and the Beginnings of Flight. By F. Finn. (November.)

The Display of the Palm Cockatoo. By the Marquess of Tavistock. (December.)—In the February 1929 issue is a description of the aviaries of J. Delacour.

The [American] Avicultural Magazine. I, No. 1, January, 1929.

The papers of the Avicultural Society of America were previously printed in 'The Pet Dealer' but with the beginning of the new year the society establishes its own journal. The name is unfortunate as it is exactly the same as the long established English journal and references to the American publication will always be confused with the latter. Even here it has been necessary for us to insert the word American to indicate that it is a different journal.

This number is mainly devoted to accounts of cage birds with an interesting description of the W. B. Kellogg bird sanctuary at Battle Creek. Mich.

The Bataleur. I, No. 1. December, 1928.

This is another new publication; a quarterly journal of African ornithology, edited by Capt. H. F. Stoneham and A. H. Paget Wilkes, and published at Nairobi, British East Africa.

The Bataleur Eagle. By H. F. S[toneham.]

Breeding of the Bataleur near Lake Albert. By C. R. S. Putman.

Oölogical Notes from Kenya and Uganda. By A. H. P. W[ilkes].

Some New Species and Forms recently added to the African List. By H. F. S[toneham].

European Migrants in East Africa. By H. F. S[toneham].

Notes on *Poicephalus gulielmi massaicus*. By C. R. S. Pitman.—There is a note of interest to the students of the Woodcock an observation of a ground Cuckoo carrying its young between its thighs, in the manner claimed by some for the Woodcock.

The Emu. XXVIII, Part 3. January, 1929.

The Status of certain Species of the Genus Ninox. By N. W. Cayley.—*N. yorki* (p. 162) and *ooldeaensis* (p. 163) described respectively from Cape York and South Australia.

Australian Magpies of the Genus Gymnorhina. By A. G. Campbell.

Honeyeaters and Cuckoos. By H. A. C. Leach.—Fuscous Honeyeater parasitized by the Pallid Cuckoo.

Nesting Notes from a Sydney Garden. By H. Wolstenholme.

Ornithological Notes on the Irwin Valley, W. Australia. By D. L. Severnty.

The Love Display of the Australian Bustard. By A. H. E. Mattingley.—Accompanied by photographs of this remarkable performance.

The Lyrebird.—Australia's Wonder-bird. By J. A. Leach.—A very interesting and comprehensive account.

Bird Migration in New Zealand. By Mrs. P. Moncrieff.

The South Australian Ornithologist. IX, Part 8. October, 1928. and X, Part 1. January, 1929.

Numerous annotated lists of South Australian birds and some lists covering one or two days which are comparable to our "Christmas Censuses."

Revue Francaise d'Ornithologie. Nos. 229–234, June–November, 1928. [In French.]

Falco naumanni and Falco vespertinus in their first plumage. By J. Rapine. [June.]

Researches on the Orientation of the Carrier Pigeon. By G. Gebault. [June.]

Ornithological Explorations in southern Oranie and eastern Morocco. By H. M. deBalsac. [July, Aug.–Sept. and Oct.]

Some Examples of Subspecific Variation in our Native Birds. By H. Jouard. [Aug.–Sept.]

Is there a New Form of the Green Woodpecker in the Eastern Pyrenees? By H. Jouard. [Aug.–Sept.]

On the Migratory Movements of Birds. By Th. Pleske. [October.]

The Provision of Safety in Flying Animals. By A. T. Plicque. [October and November.]

On the Subspecific Variability of *Parus caeruleus* in Western Europe. By H. Jouard. [November.]

L'Oiseau. IX, Nos. 7–11, July–November, 1928. [In French]

Birds of the Sea. By J. Delacour. [July.]

The Roulroul. By J. Delacour. [July.]—With a colored plate.

The Divers. By J. Delacour. [August.]

Fourth Expedition to Indo-China. By J. Delacour. [September.]—Colored Plate of *Cissa hypoleuca.*

The Pigeons. By A. Decoux. [October.]

The Pigeons. By A. Decoux and J. Delacour. [November.]—Colored plate of *Ptilinopus wallacei.*

Le Gerfaut. 18, No. 3. 1928. [In French]

Notes on Belgian Birds.

Tori. VI, No. 26. December, 1928. [In Japanese and English.]

Water Fowls in Ornamental Ponds in Europe and America. By N. Kuroda.

Revue of Some Japanese and Formosan Birds. By N. Kuroda.

Egyptian Bird Mummies. By M. U. Hachisuka. [In English.]

Birds in the Chamounix Valley, France. By M. U. Hachisuka. [In English.]

Report of the Meeting of the International Committee for Bird Protection at Geneva, May, 1928. By N. Kuroda.

On the Protection of Birds on Mt. Hieizan, Japan.

El Hornero. IV, No. 2. October, 1928. [In Spanish.]

Description of a Collection of Eggs of Argentine Birds. By C. H. Smyth.

Notes on Food of Birds (continued). By R. O. Aravena.

Birds in South American Folk Lore. Supplement. By R. Lehmann-Nitsche.

The Partridges of Argentine. By W. H. Hudson, translated and annotated by A. Steullet and E. Deautier.

The Nest of Chaetocercus burmeisteri. By E. Bredin.

Journal für Ornithologie. LXXVI, No. 4. October, 1928. [In German.]

Ornithological Observations in and about Mellum. By H. W. Curemann.

My Observations on Monarcha hebetior eichorni. By O. Meyer.

The Reed Warbler (*Locustella luscinioides*). By G. Schiermann.—Excellent photographs.

My Journey through Northeastern Brazil. (continued). By H. Snethlage.

Review of the Bird Fauna of the Tschad Region. By H. Grote.

New Forms from Northeast and East Africa. By O. Neumann.—Six subspecies.

Journal für Ornithologie. 1928 Sonderheft. [In German.]

The Egyptian Grallatores. By Alexander Koenig.

Journal für Ornithologie. LXXVII. Heft 1. January, 1929. [In German.]

On Parasitism in the Viduinae. By R. Neunzig. (see antea p. 263.)

On the Breeding Habits of some Birds of the Bismarck Archipelago. By O. Meyer.

Birds' Eggs from Kansu. By M. Schoenwetter.

Sexual and Subspecific Differences in the Skeletons of Birds. By E. Kattinger.

The Shorebirds' Migration Route along the Middle Oder. By G. Stein.

P. P. Suschkin—In Memoriam. By E. Stresemann.

New Sub-species from Papuasia. By O. Neumann.—*Trichoglossus haematodes nesophilus* (p. 197) Schachbrett Island and *Monarcha cinerascens nigrirostris* (p. 197) "Sattelberg, Kuste des Huon Golfes."

Ornithologische Monatsberichte. 36, No. 5. September, 1928. [In German.]

Breeding Habits of *Tringa hypoleucos*. By G. Stein.—Emphasizes the part taken by the male in incubation and care of the young.

On the Body Weight and Egg Size in the Ruff. By M. Harms.

New Forms of *Cinclus cinclus* from China. By W. Meise.—*C. c. beicki* (p. 138) N. Kansu; *C. c. szetschwanensis* (p. 139) Szetschwan.

In the Short Notes *Trochocercus cyanomelas somalicus* (p. 153) S. Somaliland is described by H. Grote.

Ornithologische Monatsberichte. 36, No. 6. November, 1928. [In German.]

On a Hybrid Swallow. *Delichon* × *Hirundo.*

Ornithologische Monatsberichte. 37, No. 1. January, 1929. [In German.]

On our Knowledge of *Accipiter luteoschistaceus.*

Beitrage zür Fortpflanzungsbiologie der Vogel. 4, No. 5. September, 1928. [In German.]

Variation in Silver Gull Eggs. By Fr. Dietrich.

Remarks on the Nehrkorn Catalogue. By M. Schoenwetter.

Eyrie Observations. By L. Schuster.

Beitrage zür Fortpflanzungbiologie der Vögel. 5, No. 1. January, 1929. [In German.]

On the Fish Hawk's Eyrie. By R. Kuhk.—The rearing of the young.

Pygmy Falcon Eggs. By M. Schoenwetter.

Breeding Habits of *Comatibis comata.* By J. Aharoni.

Ornithologische Beobachter. XXV, No. 12—XXVI, No. 5. September, 1928–February, 1929. [In German and French.]

Numerous Notes on Swiss birds and bird protection. Also an article by Dr. Arnold Masarey on Bird Life in the Environs of Tunis. [December and January.]

Orgaan der Club van Nederlandsche Vogelkundigen. Jaargang I, No. 1–2. October, 1928. [In Dutch.]

The "Orgaan" continues the "Jaarberichte" which has been published by the Club since 1911.

Breeding of the Fire-crest in Holland. By J. H. Pellinkhof.

Observations on the Little Gull. By C. G. B. Kate with remarks on statements in Witherby's 'Handbook.'

On the Nesting of the Swift *Hemiprocne longipennis*. By H. van Meurs.—Excellent photographs. The bird covers the entire nest with its body giving it the protection that it lacks from being built in the open.

Nest and Eggs of the Green Sandpiper and Red-necked Grebe. By T. G. de Vries.

Ardea. Vol. XVII, No. 3. December, 1928. [In Dutch.]

On our Knowledge of the Nest Life of *Panurus biarmicus*. By C. G. B. Kate.

Nesting Colonies of Ibis and Egret etc. in Kisbalaton, Hungary. By Fr. Havischmidt.

Ethology and Psychology of the Silver Gull. By A. F. J. Portielje.—An exhaustive study.

Danske Fugle. 1928, No. 2. [In Danish.]

On the Biology and Morphology of the Species of Regulus. By L. Moesgaard.

This issue consists mainly of bird-banding data especially of the Starling.

Ornis Fennica. V, Nos. 1-4. 1928. [In Finnish.]

Nesting of *Podiceps auritus* and *Falco peregrinus* and many notes on Finnish birds and bird banding.

Ornis Fennica. 1928. Sonderheft. [In Finnish.]

Ornithological Studies on the Oulujärvi-see (Uleatrask) in the Summer of 1927. By Dr. Ivar Hortling.

Ornithological Articles in Other Journals.

Lloyd, Hoyes. Notes on the Introduction of the Pheasant in Some of the Provinces of Canada. (*Canadian Field Naturalist*, September, 1928.)

Hantzsch, B. Contributions to the Knowledge of the Avifauna of N. E. Labrador. cont'd. (*Canadian Field Naturalist*, September, 1928.)

Tufts, R. W. A Report concerning the Disappearance of Bird Life at Lighthouses on the Atlantic Coast.—Reports from keepers of 45 Canadian lighthouses. (*Canadian Field Naturalist*, October, 1928.)

Lewis, H. F. Notes on Birds of the Labrador Peninsula in 1928. (*Canadian Field Naturalist*, November, 1928.)

Pearse, Theed. Notes on a Colony of Glaucous-winged Gulls in the Gulf of Georgia, B. C. (*Canadian Field Naturalist*, January, 1929.)

Stewart, Walter. Studies of some Lancashire Birds. The Jay, Rose-breasted Pastor and Stock Dove. (*Scottish Naturalist*, July–August, 1928.)

Baxter, E. V. and Rintoul, L. J. Report on Scottish Ornithology for 1927. (*Scottish Naturalist*, July–August, and September and October 1928.)

Stenhouse, J. H. Remarkable Decrease of the House Sparrow in Fair Island and Shetland. (*Scottish Naturalist*, September–October, 1928.) A disease swelled up the head and eyes.

Hamilton, David. Further Observations on the Swift. (*Scottish Naturalist*, November and December, 1928.)

Chapin, J. P. Birds of Africa's Big Game Fields. (*Natural History*, September–October, 1928.)

Bailey, A. M. Feathered Water Babies of the Prairies. (Natural *History*, November–December, 1928.)—Wonderfully good photographs of Coots, Grebes etc.

Anon. Keeping Tab on American Waterfowl. (*American Forests and Forest Life*, October, 1928.)—Counting the migratory game birds.

Flint, H. R. Some Rocky Mountain Grouse. (*American Forests and Forest Life*, October, 1928.)

East, Ben. Bubo Junior. (*American Forest and Forest Life*, November, 1928.)

Gillespie, Mabel. The Sport of Kings. (*American Forests and Forest Life*, December, 1928.)

Borman, F. W. Birds in Egyptian Gardens. (*Bird Notes and News*, Spring, 1928.)

CORRESPONDENCE.

Bernhard Hantzsch—A Personal Note.

Editor of 'The Auk'

To the excellent article on the Arctic work of Bernhard Hantzsch, which Mr. Rudolph Martin Anderson contributed to 'The Auk' of October, 1928, may I add a word of personal recollection. I think it was in the summer of 1908, after his return from his fruitful journey to Labrador and when the plans for his great sojourn in the Arctic were seething in his mind, that he visited the Royal Scottish Museum. He came particularly to see the bird collections, but he was interested in many other things, and I had the great pleasure of spending a happy day in his company in the Museum and the city. My impression also is that he paid us a short call again in July, 1909, on his way to Dundee, whence he set out on that fateful voyage from which he was never to return.

However they may have confused dates, the twenty years that have passed have not obliterated the clear picture Hantzsch left upon my mind. He was short in stature and slender in build, clad in a dark suit which accentuated the thinness of his face and his colorless complexion. His clothes were smartly cut, and gave the proper impression of the quick alert mind which animated the body they covered. He spoke English well and was very particular about the pronunciation of his own name. But the dominating impression is one of alertness and enthusiasm. He talked with rare interest of the plans for his great Arctic expedition, of how he proposed to live with the Eskimos so that he might gather the intimacy of their language, and thus gain new insight into their traditions and folklore.

Although he kept in clear view the possibilities of natural history observation and collecting, his ideas revolved about the ethnographical results which he might be able to achieve. None knew better than he, the discomfort and hardships which the course he proposed to follow was sure to entail, but he looked forward with single-mindedness to the gains which he hoped would accrue to science through his self-sacrifice. We bade him good bye and God speed, wondering that so delicate a body should plot so rough and hazardous a journey, and little dreaming that before the journey was over he should make the final sacrifice to his love of knowledge.

JAMES RITCHIE.

Royal Scottish Museum,
Edinburgh.

OBITUARIES.

THE members of the American Ornithologists' Union far and wide were saddened by the death on February 22, 1929, of Dr. Jonathan Dwight at his home in New York in the seventy-first year of his age There are few if any who have served the Society so long and so unselfishly. Elected an Associate at the first meeting in 1883 and advanced to a Fellow (then known as Active Member) in 1886, he subsequently held the office of Treasurer for seventeen years, Vice President for three and President for three. As Treasurer he also acted as business manager of 'The Auk' and in handling the burdensome financial details did much to keep the publication up to its high standard. He was also one of the Investment Trustees and was mainly responsible for the care of the Society's invested funds. No task seemed too laborious if the A. O. U. was to benefit from it.

In his scientific activities he served for many years as a member of the Committee on Classification and Nomenclature of North American Birds and by his wholesome conservatism exercised an important influence on the actions of his associates.

His associations outside of the A. O. U. were mainly with the American Museum of Natural History where he was appointed a Research Associate and where he had deposited his magnificient collection of American birds which formed the basis of his notable publications on molting and on the Laridae. Personally Dr. Dwight was a modest, kindly gentleman in all that that word implies. He endeared himself to all with whom he came in contact and most ornithologists who have visited New York during the past thirty years have delightful recollections of the hospitality of his home and the pleasure of consulting with him his unrivalled library of American Ornithology. He missed we believe but one meeting of the Union, the last, when his illness prevented him from making the journey to Charleston and those who attend these annual gatherings will recall his kindly interest in the work of all whether beginners or masters of our science.

In his passing American ornithology has lost a prominent figure, the Union a devoted officer, and the members a kind and generous friend. Mr. James H. Fleming has been appointed by the President to prepare a memorial address for presentation at the annual meeting in October next.—W. S.

SCARCELY had we learned of Dr. Dwight's death when news came of the passing on March 7, 1929 of Edward Howe Forbush, a little less than a year from the date when a notable gathering of ornithologists met in Boston to congratulate him on the occasion of his seventieth birthday.

To Mr. Forbush, American Ornithology owes a debt of gratitude for the tremendous work that he accomplished in furthering popular bird study and bird conservation. As Ornithologist to the Massachusetts Board of Agriculture he published one of the most important series of reports on economic ornithology that any State has produced, while he travelled over most of the Commonwealth working for the establishment of local bird clubs and instructing the masses on the value of bird life. Indeed in the fore front of every movement for conservation in New England stood the name of Edward Howe Forbush.

Then at the very peak of his career he produced his 'Birds of Massachusetts and Other New England States' which will stand as one of the great classics on American ornithology. Unfortunately he did not live to see the last volume published.

To Forbush the living bird rather than the stuffed specimen was the main object of ornithology and no bird walk was to strenuous, no effort too great, if something of interest was to be seen.

Mr. Forbush was elected an Associate of the A. O. U. in 1887, became a Fellow in 1912, and served for several years ont he Council, while he took a great interest in the annual meetings and was ever active in advertising the Society and its objects in the effort to increase its membership and broaden its influence.

Probably no member of the Union was more widely known or enjoyed such popularity among the great army of American bird students and his loss will be deeply felt both by those who have profited by his writings and those to whom his personal friendship and leadership meant so much.—W. S.

JUST AS WE GO to press we are shocked to learn of the sudden death of Robert Ridgway at his home in Olney, Illinois in the 79th year of his age. Surely the American Ornithologists' Union has been sorely stricken in the few weeks just passed! and by Mr. Ridgway's death the number of surviving founders is reduced to five.

If in any field of endeavor it were possible to pick out one man as the leader of his fellows, Robert Ridgway would surely be acclaimed the leading American Ornithologist. For more than a generation his name has been identified with his favorite science in the minds of all who share his interests. As Curator of Birds in the U. S. National Museum for over 50 years, as one largely responsible for the success of the first A. O. U. 'Check-List' and as author of those classics in the literature of American ornithology: 'A Manual of North American Birds,' (1887) and the monumental 'Birds of North and Middle America' (1901–1919) as well as of hundreds of other publications, Ridgway was known and honored throughout the ornithological world.

Besides being a Founder of the American Ornithologists' Union he had been a member of its Council ever since organization and had served as

Vice President and President, and for many years as a member of the Committee on Classification and Nomenclature.

Great as is the loss that science has suffered in his passing, it is to those who had enjoyed the privilege of his personal acquaintance that the death of Robert Ridgway comes as a calamity.

At his desk in the old Smithsonian gallery and later in the Bird room of the National Museum he was always accessable to the visiting ornithologist and he was ever ready to talk to the beginners, to explain to them what work he happened to be engaged upon or to discuss their own problems with them. How many of the present generation of technical ornithologists have to thank him for inspiration and encouragement when they were sorely needed.

Modest, retiring, generous, full of kindness, Robert Ridgway the man, will ever hold his place in the hearts of those who knew him regardless of the fame that history will justly accord to Robert Ridgway the ornithologist.—W. S.

Dr. Frederic Augustus Lucas, a Retired Fellow of the Union, died at Flushing, N. Y., Feb. 9, 1929. He was born at Plymouth, Mass., Mar. 25, 1852, and had he lived a few weeks longer he would have reached his 77th birthday. He was the son of Henry Lucas, a sea captain, and Elizabeth Oliver Lucas, and his education was acquired in the public schools, in Ward's Natural Science Establishment, and in the broad school of experience. In 1909 he received the honorary degree of Doctor of Science from the University of Pittsburgh.

His father was accustomed to take his family with him on his voyages and thus at an early age the son visited the coasts of Chile and Peru and the ports in the Orient and became deeply interested in some of the forms of marine life which later occupied much of his attention. In 1871, he entered Ward's Natural Science Establishment at Rochester, N. Y., where he remained eleven years working at taxidermy, osteology, and museum technique. In 1882 he joined the staff of the U. S. National Museum and during the succeeding 22 years occupied successively the positions of osteologist, assistant curator, curator of the division of comparative anatomy and acting curator of vertebrate fossils. Under his direction a comprehensive exhibit of comparative anatomy was built up which received high praise and was excelled by similar exhibits in few if any other institutions. Removing to Brooklyn, N. Y., in 1904, Lucas served for seven years as curator-in-chief of the Museum of the Brooklyn Institute of Arts and Sciences and then, in 1911, was appointed Director of the American Museum of Natural History in New York. After twelve years' service in this post he retired from the directorship at three score and ten and as Honorary Director continued actively at work until a few days before his death.

While Lucas' work lay mainly in the fields of osteology, preparation of Museum material and museum administration, he always maintained an

active interest in birds and was a close observer and an accurate writer. He was elected an Associate of the Union in 1888, an Active Member (Fellow) in 1892, and was transferred to the Retired List at his own request in 1921. His publications on birds include a number of titles of which the most important are those relating to the Great Auk and to avian anatomy. In the summer of 1887 he joined an expedition to Funk Island, off the coast of Newfoundland, to collect bones of the Great Auk and his report on the results of the trip still forms one of the most important contributions to our knowledge of the status of this species in America. He was the author of two books 'Animals of the Past,' 1901, and 'Animals before Man in North America,' 1902. He did editorial work on several dictionaries and encyclopaedias, reviewed many books and papers, and the full list of his publications forms an extensive bibliography.

Through his charming personality, affability, cheerfulness and readiness to assist in any way possible, he gained a host of friends. In accordance with the usual custom, a memorial of his work will be presented by one of the Fellows at the next annual meeting of the Union.—T. S. P.

Colonel Wirt Robinson, U. S. A., retired, a member of the American Ornithologists' Union since 1901 (associate from 1897), died in Washington, D. C., on January 20, 1929, after a brief illness. He was a son of the late William Russell and Evelyn (Cabell) Robinson, and was born October 16, 1864, at "Fernley," the plantation of his grandfather, Dr. Clifford Cabell, in Buckingham Co., Virginia. This plantation overlooked the James River, and at that time was bordered by a wilderness of virgin forest in which game of various kinds was very abundant. His father was a keen student of nature, and in rambles about the country with his sons, Wirt and Cabell, imparted much natural history lore to them. Wirt particularly was greatly interested in the subject and eagerly absorbed every item of information he could glean. From his earliest days he was an ardent sportsman, fisherman and naturalist, and as soon as he learned to write, began to keep a diary, in which he recorded the various observations of interest made during each day; this he kept up regularly, almost to the time of his death.

During their youthful years the brothers spent the winters at their father's home in Richmond, where they attended school, and the summers at "Fernley," engaged in natural history pursuits and other outdoor recreations. Their spare time in winter was devoted largely to laying plans for the next summer at the plantation.

From 1879 to 1882, Wirt was a student at Richmond College, and later took a course in chemistry at the Richmond Medical College. In 1883 he entered the U. S. Military Academy, at West Point, from which he graduated in 1887. During his career at this period he was "twice rated as a distinguished cadet, standing above ten in the subjects of mathematics, French, drawing, chemistry, ordnance and gunnery, tactics and discipline. In the latter he was first in his class."

At graduation he was assigned to duty as Second Lieutenant, with the 4th Artillery at Fort Adams, R. I., where he remained for two years, later serving with the Artillery in Georgia and Florida. In 1891 he was designated Instructor of Modern Languages at West Point, and in 1894 was detailed as military instructor at Harvard University, the first officer to be so detailed, and remained in this capacity until 1898. He organized and trained the students and delivered over 90 lectures per year to large classes. His success in this undertaking was noteworthy, and is said to have been in the nature of a forerunner of the present system of Reserve Officers' Training Corps. During his detail at Harvard he embraced the opportunity of adding to his own knowledge by taking courses in calculus and in Spanish. From 1899 to 1903 he was Assistant Professor of Modern Languages at West Point, and from 1904 to 1906 served as head of the department of Chemistry and Explosives at the School of Submarine Defense at Fort Totten, N. Y.; while here, he attacked the subjects of chemistry and related fields with his usual energy, publishing three pamphlets on the analysis of explosives.

In 1906, Colonel (then Captain) Robinson again was detailed to West Point as Assistant Professor of Chemistry and so continued until 1911, when he became Professor and head of the department, a position he held until the date of his retirement, October 16, 1928. In the words of his Order of retirement, "Such is briefly the brilliant record of this unusually cultivated officer and gentleman who now retires to civil life leaving behind him a noble example of 'Duty, Honor, Country,' and an inspiration to the officers and enlisted men of our Army, and to the gentlemen Corps of Cadets, present and future."

Official duties naturally claimed much of Col. Robinson's time, but he found opportunity at every station to increase his knowledge of natural history, and at frequent intervals managed to make short expeditions to easily accessible parts of tropical America. His first trip of this nature, on which he was accompanied by his wife and brother, was made in 1892, to the island of Curaçao, the Magdalena River region of Colombia, and overland nearly to Bogotá. The results of this trip were embodied in an entertaining and copiously illustrated volume entitled "A Flying Trip to the Tropics," published in 1895. In the summer of the same year he visited Margarita Island, Venezuela, and included the adjacent mainland in his itinerary. He returned to Venezuela in 1900, accompanied by Dr. M. W. Lyon, Jr., the mammalogist, and made collections in the vicinity of La Guaira. Reports on the birds and mammals of both of the Venezuelan expeditions were published by him in collaboration with other authors. Other trips were made to Jamaica, Cuba, and Central America. When on an official assignment in Cuba, in the autumn of 1903, he secured a specimen of the Wheatear, the only individual of this species thus far recorded from the West Indies. Several of the birds and mammals obtained on his early visits to South America proved to be new and were described by others, some of them being named in his honor.

When Robinson was a student at West Point, his father purchased a large tract of land near Wingina, in Nelson Co., on the opposite side of the James River, though not far from "Fernley," and here Col. Robinson spent his vacations when not abroad. In later years, as his collections and library expanded, he had a commodious brick building constructed at this place to house his accumulations, in which he arranged the material to his satisfaction, and here he prosecuted his studies during his spare time. His interests were not by any means confined to birds and mammals, for he had a large and varied collection of insects from many parts of the world, though he specialized particularly in coleoptera and lepidoptera; and he possessed a very extensive series of local Indian relics, many examples of which he had personally gathered. He carried on his investigations in natural history with the same unbounded energy and enthusiasm that characterized his work in other lines, though he always did so in the guise of an amateur. When he found a species that was undescribed, as he frequently did, he turned it over to an expert for technical introduction to science. He had a vast fund of information on zoological and other subjects that he freely though unostentatiously imparted to others, quite in keeping with his natural spirit of frankness and generosity. His published writings were not numerous, but include about a dozen items on ornithology in addition to those mentioned above, the earliest being one on albinism in birds, issued in 1889; he was also the author of a treatise "Elements of Electricity," published in 1914.

Upon his retirement, Col. Robinson expected to spend his summers at his brother's home near Wingina, and his winters in Washington, where he hoped to pass much of his leisure time at the National Museum. These plans were set at nought by his untimely death, which occurred just after he settled in Washington in January of this year. His remains were taken to West Point for burial.

Col. Robinson was twice married; first to Alice Phinney, of Newport, R. I., in 1890, who died in 1918, second to Nancy Hinman Henderson, of Chicago, Ill., in 1920, who survives him. A son, Russell Robinson, was born of the first union, and a daughter, Evelyn Byrd Robinson, of the second.—C. W. R.

William Lyman Underwood, since 1900 an Associate of the American Ornithologists' Union, died at his home in Belmont, Mass., on January 28, 1929. He will be remembered by many for his genial personality as well as for his occasional delightful lecture on birds or other natural history subjects. Born at Belmont on March 4, 1864, the son of William J. and Esther C. Underwood, he acquired a public school education and in 1880 entered his father's business in the well-known firm of Wm. Underwood Co. Here he became much interested in improved methods of preserving food in tinned form and did much to maintain the world-wide renown of the firm's products. He was intensely fond of out-of-door life and spent many summer vacations at his camps in Maine and in

New Brunswick. Although an ardent fisherman and yachtsman, he cared nothing for shooting but in later life acquired great skill in animal photography, particularly of birds and large game. Many of his flash-lights of moose and deer are of unusual beauty. In 1896 he began lecturing in the vicinity of Boston and delighted many popular audiences with accounts of his field studies, combining much of entertaining and valuable observation with a keen appreciation of the humorous. In 1900 he became lecturer in the biological department of the Massachusetts Institute of Technology, especially on the application of bacteriology to the canning industries. On one occasion, in the course of a winter's visit to northern Maine his attention was attracted by some unusually large mosquito larvae, which he subsequently brought back and reared. These proved to be a new species, which was named after him, *Eucorethra underwoodi*. On another occasion he brought back from a Maine logging camp the story of an infant black bear, which, after the mother had been killed, was reared by one of the women at the camp and later grew to full size. The history of this cub, which he afterward acquired as a pet, is the subject of his book, "Wild Brother." Another volume, "Wilderness Adventures," is a sheaf of varied exploits and observations, while numerous popular articles in various magazines, indicate his desire to share his happy experiences with others. He was twice married: in 1887 to Ida Cushing of Boston, and after her death to Elizabeth Kelly in 1923. Although he contributed little in the way of published articles on ornithology, he did much to further popular interest in outdoor life and to encourage the use of photography in its study.—Glover M. Allen.

On February 4th, in the Flower Hospital, New York, there passed away at the age of 33, one of Canada's most gifted ornithologists and one of the ablest field men on the continent. Cyril Guy Harrold was born on August 5, 1896, at Lapford, Devonshire, England. His death, from meningitis following inflammation of the left ear, itself an outcome of influenza, was extremely sudden and came as a heavy and unexpected blow to his relatives and friends. A sister and brother, both living in Canada, survive him.

Of a retiring and reserved disposition, Harrold was personally known only to a relatively small circle of friends, but his remarkable ability in the field was becoming widely known and there is no doubt that he had a great future before him. Birds were his first love but his interests covered a wide field and ranged from insects to mammals. He was intimate with the birds of the holarctic region generally, much of his knowledge having been acquired at a youthful age during his school life at Trent College, where he was already an enthusiastic reader, observer and collector, skinning and mounting birds as a pastime as opportunity offered. Here, for three years, he was curator of the Natural History Society. He was already gaining distinction as a shot and was one of the school team of four at Bisley when Trent College won the

Country Life Cup in 1912. He came to Canada in April 1914. On account of defective eyesight he was debarred from active service and remained in the Dominion during the war. His interests speedily centered on the native avifauna, first in the east and later in the west and there were but few Canadian species of which he did not ultimately gain first hand knowledge. He was elected an Associate Member of the American Ornithologists' Union in 1923.

Although most frequently collecting by himself, he spent several summers in the field with Mr. P. A. Taverner in the interests of the National Museum at Ottawa. His most important trip was to Alaska for the California Academy of Natural Sciences. Most of his time was spent on Nunivak where, under incredibly difficult climatic conditions, he collected nearly 650 skins and skeletons of birds and mammals prepared in his usual skilled and painstaking manner. His skins are justly famous for their beauty and uniformity. This collection included at least three species new to the north American avifauna and many other rarities. At the time of his death he was attached to the American Museum and was preparing to leave, as collector of birds, with the Madagascar Expedition. During his few weeks in New York, he had won the esteem and affection of all who came into contact with him.

Harrold's publications were few, but his opportunities of writing were very limited. He was an accurate artist and frequently used the pencil in the field although none of his drawings has been published.

In the bare list of facts enumerated above there is little to indicate anything of Harrold's remarkable personality. As a campmate he was unique. He believed that obstacles were made to be overcome and nothing could upset his serenity or damp his ardour. As an observer and collector he was without a rival. He was not only an indefatigable worker and a remarkable shot, but an acute observer, while his knowledge and memory of bird notes was phenomenal. The writer, who was privileged to spend many weeks with him in the field, never ceased to wonder at the infallibility of his identifications frequently based, in the first place, on nothing more than a single note. The subsequently collected specimen invariably proved him to be right.

In the death of C. G. Harrold north American ornithology has sustained an irreparable loss. His relatives and friends will never cease to mourn the departure of a most lovable and gifted personality, the embodiment of generosity and unselfishness, the epitome of all that is included in the term gentleman.—Wm. Rowan.

Abel Chapman, a Corresponding Fellow of the American Ornithologists' Union since 1921, died at his home, Houxty, Wark-on-Tyne, Northumberland, England, Jan. 24, 1929, at the age of 77. He was the oldest son of Thomas Edward Chapman and was born at Silksworth Hall, Sunderland, England, October 4, 1851. His education was received at Rugby and for twelve years, from 1875 to 1897, he was a partner in the firm of T. E.

Chapman & Son; later he became a director in the firm of J. W. Cameron & Co., Ltd. He was unmarried, traveled extensively in Europe, Asia, and Africa and has given an account of his experiences in his latest book 'Retrospect,' 1928.

Big-game hunting occupied much of his attention and formed the subject of several of his best known books on East Africa, Soudan, Norway, and Spain. He was a well-known field naturalist and devoted considerable attention to birds. He discovered the nesting of the Flamingo in southern Spain (Ibis, 1884, p. 66) and gave an interesting account of the habits of the Grouse in deep snow in his first book on 'Bird Life of the Borders.' His 'Art of Wild Fowling' is regarded as a classic and his early work 'Bird Life of the Borders' appeared in two editions, 1889 and 1907. Among his other books may be mentioned 'Wild Spain,' 'Wild Norway,' 'On Safari,' 1908, 'Savage Soudan,' 1921 and 'The Borders and Beyond, Arctic, Cheviot, Tropic,' 1924. Chapman was not only a forceful writer but an artist as well and illustrated several of his books with his own sketches. He was an outstanding example of that group of travelers, all too small, who are not only fond of adventure but have the ability and energy to record the results of their trips in an accurate and popular manner, and thus make their experiences available to a large circle of readers.—T. S. P.

NOTES AND NEWS.

DWIGHT MEMORIAL FUND. A member of the A. O. U. who desires to remain anonymous, has given to the Union the sum of $300 to be used in the publication of short articles in 'General Notes' on Gulls. The articles are not to exceed two pages in length, his idea being to keep Dr. Dwight's name associated with the group of birds in which he was most interested. Should the fund not be exhausted during the next ten years, the balance will revert to the general purposes of 'The Auk.'

Each of these contributions will be marked by a foot note "Published by the Dwight Memorial Fund" and we should be glad to receive at any time notes on the life history, plumage, systematic relation etc. of any species of Gull that will add to our knowledge of this interesting group of birds which formed the subject of one of Dr. Dwight's most important publications.

BIRD LOVERS will rejoice at the passage of the Norbeck-Andresen Bird Refuge Bill in the House on February 9.

The importance of this measure does not lie in the $8,000,000 authorized for the purchase of marsh and swamp lands for migratory bird sanctuaries, but in the fact that the Government is now definitely committed to a policy of establishing a system of inviolate refuges for the persecuted wild fowl and insect-eating birds of America. The friends of Congressman August H. Andresen of Minnesota are congratulating him upon his successful handling of this important conservation measure.

This bill passed the Senate last April under the guidance of Senator Peter Norbeck of South Dakota, and until recently it reposed in the House Committee on Agriculture. It was generally regarded as hopeless to secure final action at this short session of Congress; furthermore, it was supposed that the Bureau of the Budget would not approve any new undertaking involving additional expenditures of public funds.

The passage of this bill followed one of the most intensive and best coordinated campaigns ever waged in the interest of any measure for the conservation of wild life. It is estimated that more than 200,000 supporting letters and telegrams poured into Congress from all parts of the United States during the past three weeks.

This Act provides that three Cabinet members, two Senators, and two Congressmen, and the Game Commissioner of the State concerned, shall decide on all areas of land and water to be purchased or leased by the Government as inviolate bird sanctuaries. The Department of Agriculture shall have permanent charge of such areas.

Authorization for making appropriations is as follows: $75,000 the first year; $200,000 the second; $600,000 the third and $1,000,000 annually for the next seven years, thereafter $200,000 annually for maintenance.

By Order-in-Council the Province of Ontario has made Abbey Dawn Sanctuary, near Kingston, a Crown Game Preserve taking in three hundred acres of very picturesque and diversified territory which is the site of "Abbey Dawn" where Wallace Havelock Robb, Poet of Canadian Birdland, carries on his unique activities for Canada.

Mr. William H. Hoffstat, 14 E. 55th Street Terrace, Kansas City, Mo., will be glad to mail to anyone who sends a self addressed stamped envelope a copy of his circular 'How to Build a Bluebird House.' He is interested solely in the welfare of birds especially the Bluebird.

The 'Ten Year Index of The Auk,' 1911–1920, will probably be ready for distribution within a few weeks after the appearance of this number of 'The Auk.' It forms a volume of about 340 pages and contains a detailed index by subjects and authors of the contents of the ten annual volumes. The edition is limited to 500 copies and the price is $5.00 for cloth bound and $4.00 for paper bound copies. Orders accompanied by remittances before July 1 will be filled at the rate of $4.50 for cloth and $3.50 for paper bound copies. All orders should be addressed to the Treasurer, W. L. McAtee, 200 Cedar Street, Cherrydale, Va.

The first part of the new (fourth) edition of the A. O. U. 'Check-List' is now in the hands of the printer and while the proof will be held for sometime in order to give it a wide circulation and to make the details of the ranges of the species as accurate as possible, the work should be ready for distribution by the close of the year.

The Fourth Annual Meeting of the Cooper Ornithological Club will be held in San Francisco and Berkeley, California, on May 17 and 18, 1929. A large attendance of California ornithologists is expected and the Committee will welcome members from the East. We earnestly hope that any eastern ornithologists contemplating a trip to the Coast will arrange to make it at this time as the personal contact of "bird men" from the two sides of the continent is always helpful and enjoyable.

The Seventh Annual Meeting of the Baird Ornithological Club was held on March 21, 1929 at the residence of Dr. H. H. T. Jackson, in Chevy Chase, Maryland. Officers elected for the ensuing year were: President: Dr. Alexander Wetmore; Vice President: E. R. Kalmbach; Secretary: Frederick C. Lincoln; Councilors: Dr. C. W. Richmond and Dr. T. S. Palmer.

After a series of short notes contributed by several members, Dr. Wm. M. Mann, Director of the National Zoological Park, gave a most interesting account of the bird collections in his care, adding many experiences of his own with different species in the field. Seven hundred species have been exhibited in the National collection, and Dr. Mann dealt with the success attained in acclimating representatives of the different groups, for show purposes.—Frederick C. Lincoln, *Secretary.*

THE DELAWARE VALLEY ORNITHOLOGICAL CLUB held its thirty-ninth annual meeting at the Academy of Natural Sciences in Philadelphia on January 3, 1929, with thirty-five members present. The usual sixteen meetings were held during 1928, with field trips on Washington's Birthday, Good Friday and Memorial Day.

Officers for the ensuing year are: President: John D. Carter; Vice President: Samuel C. Palmer; Secretary: Julian K. Potter; Treasurer: Henry T. Underdown.

THE Forty-seventh Stated Meeting of the American Ornithologists' Union will be held in Philadelphia October 22–24, 1929, with a business meeting on Monday the 21st, and a field trip to Cape May, N. J. on Friday the 25th. A visit to the Zoological Gardens will also be arranged for one of the afternoons.

The scientific sessions will be held in the lecture hall of the Academy of Natural Sciences, Logan Square (Nineteenth and the Parkway), while the business meetings and dinner will be at the Benjamin Franklin Hotel, (Chestnut and Ninth Streets) which will be the headquarters.

It is none too soon for members to make arrangements so as to be free from business engagements during the week of October 21 and thus able to make the trip. Philadelphia is centrally located and a large attendance is expected which always ensures an enjoyable meeting. Those who have not hitherto attended an A. O. U. meeting are especially urged to be present. They will then realize the tremendous influence of these gatherings in stimulating ornithological work and the opportunity that they afford of making friendships and receiving inspiration.